

Cellular Expression of β_2 AR- β gal $\Delta\alpha$ Fusion Protein in C2 Clones
(measured by anti- β -gal ELISA)

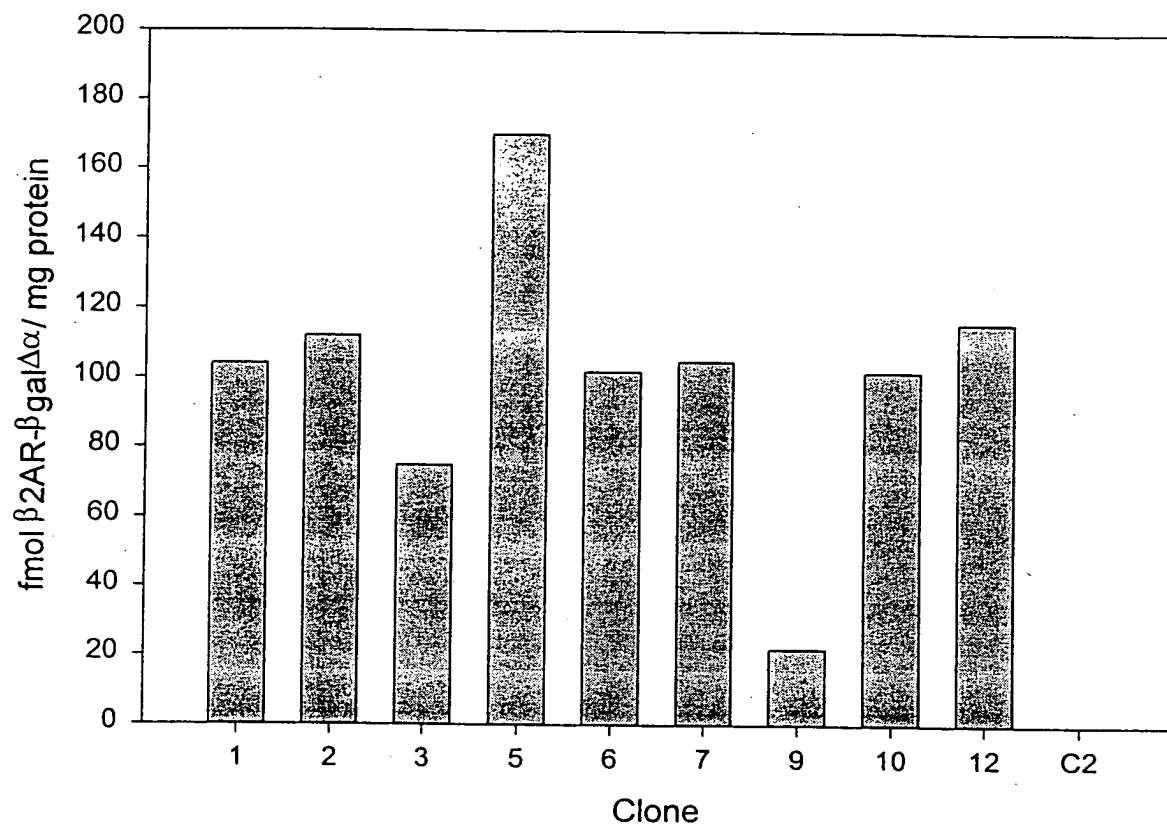


FIGURE 1A

Cellular expression of β Arr2- β gal $\Delta\omega$ fusion protein in C2 clones
(measured by anti- β gal ELISA)

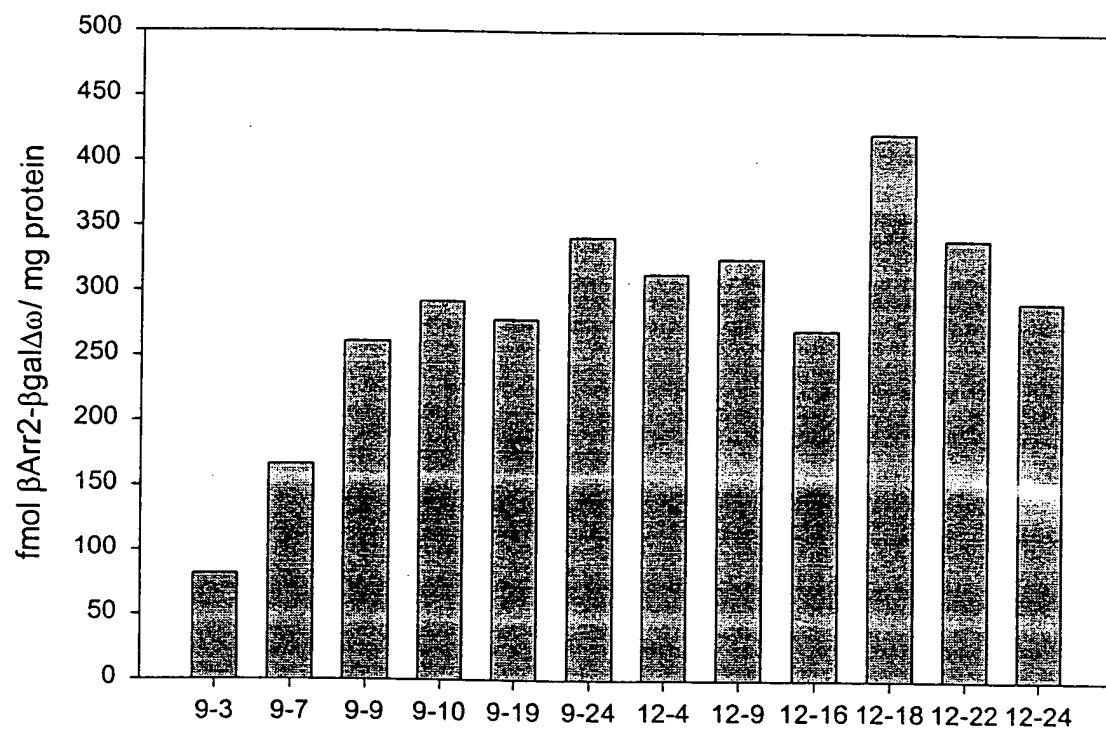


FIGURE 1B

Agonist Stimulated cAMP Response in C2 Cells Expressing $\beta 2AR$ - $\beta gal\Delta\alpha$

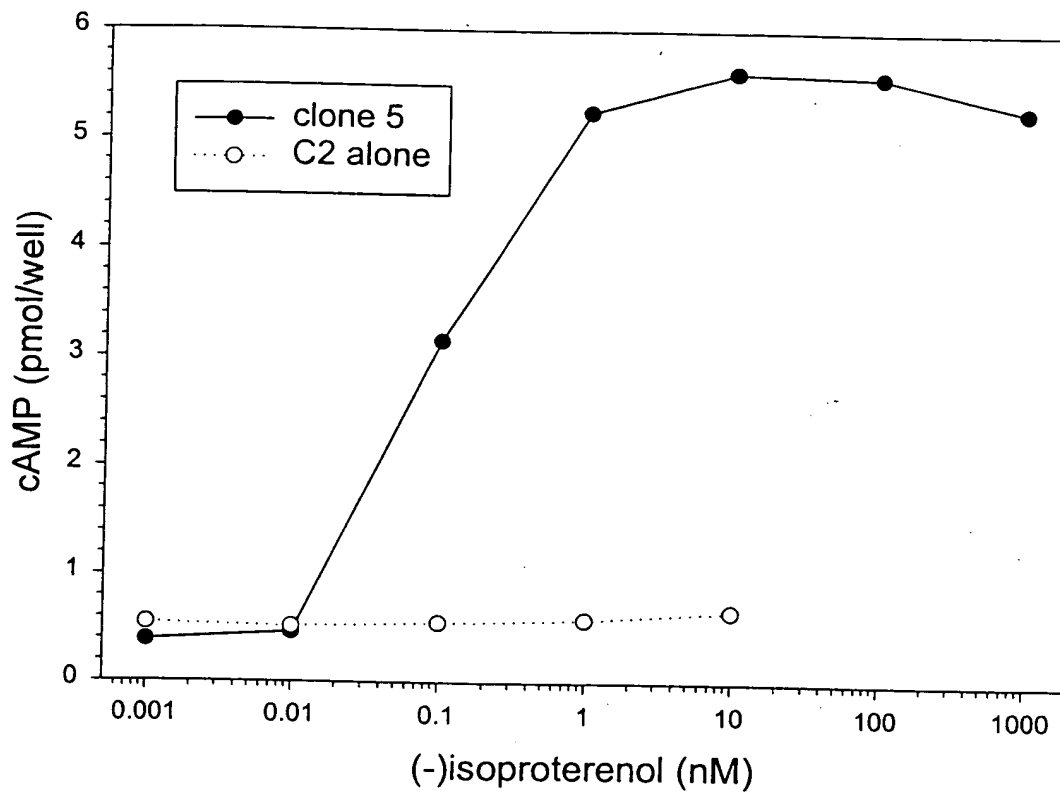


FIGURE 2

β -galactosidase Complementation as a Measurement for β 2AR- β gal $\Delta\alpha$ interacting with β Arrestin2- β gal $\Delta\omega$ upon agonist Stimulation

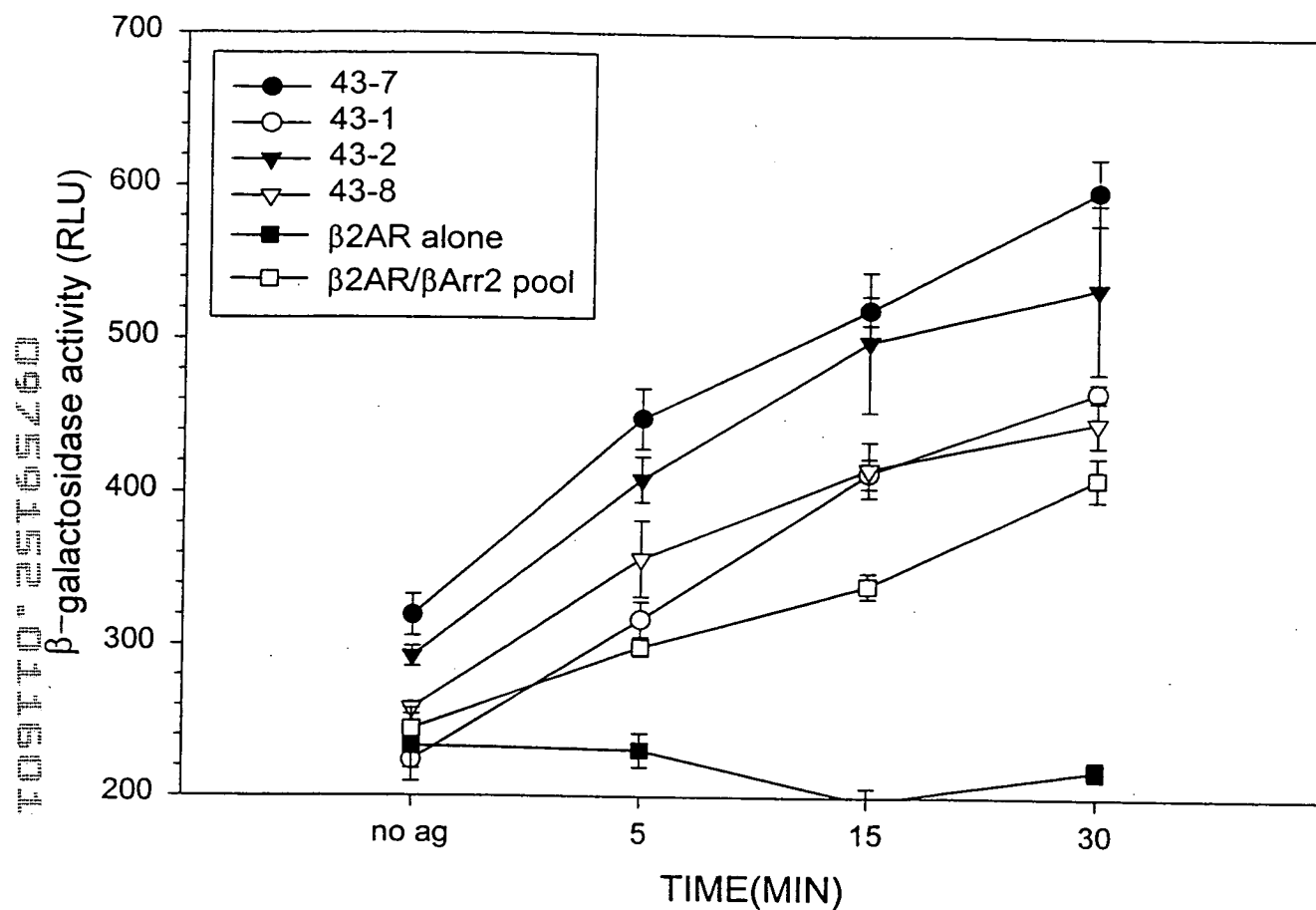


FIGURE 3A

β -galactosidase Complementation as a Measurement for β 2AR- β gal $\Delta\alpha$ Interaction with β Arrestin1- β gal $\Delta\omega$ upon Agonist Stimulation

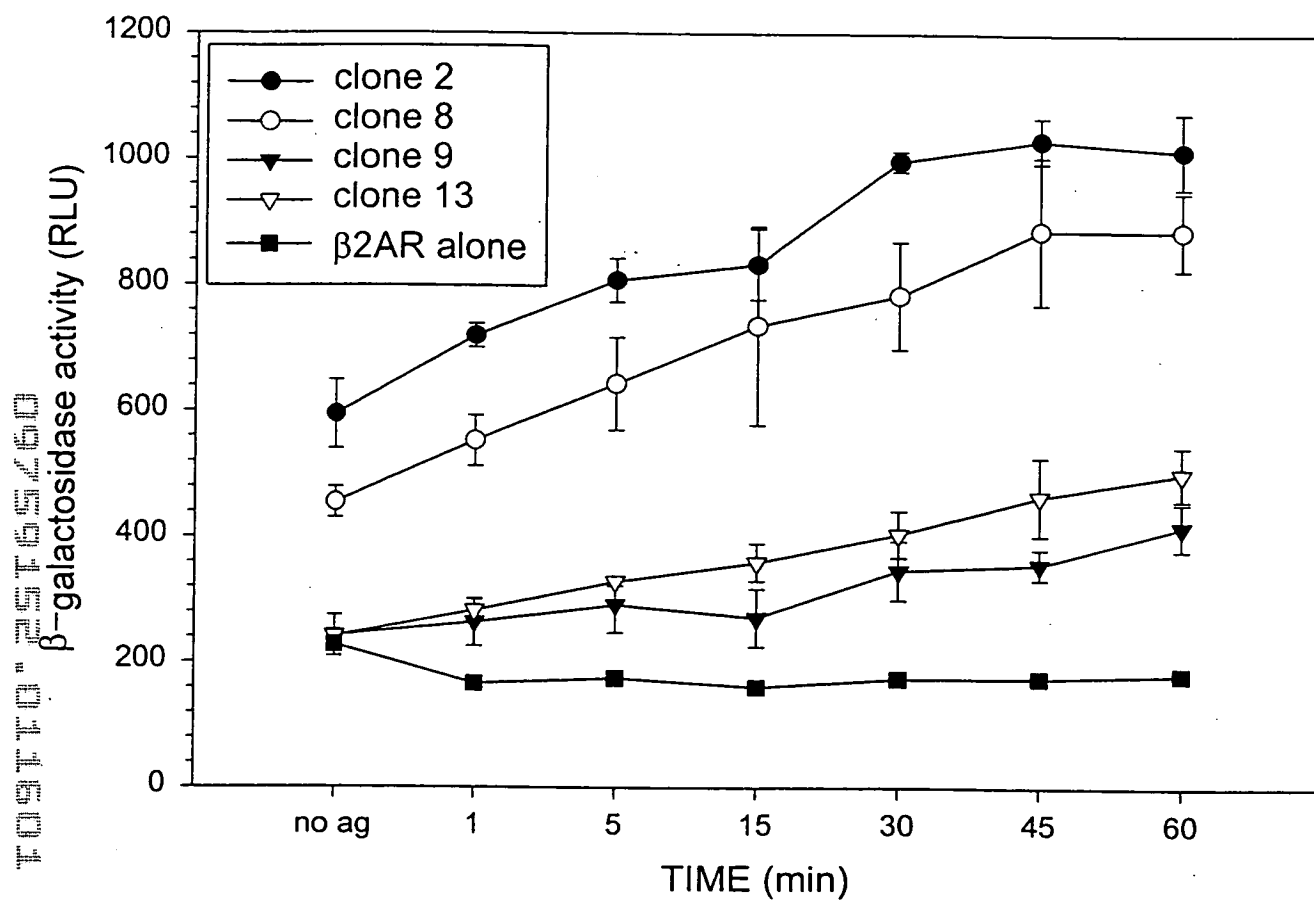


FIGURE 3B

β -galactosidase Activity in Response to Agonist in C2 Cells
Coexpressing β 2AR- β gal $\Delta\alpha$ and β Arrestin2- β gal $\Delta\omega$ Fusion Proteins

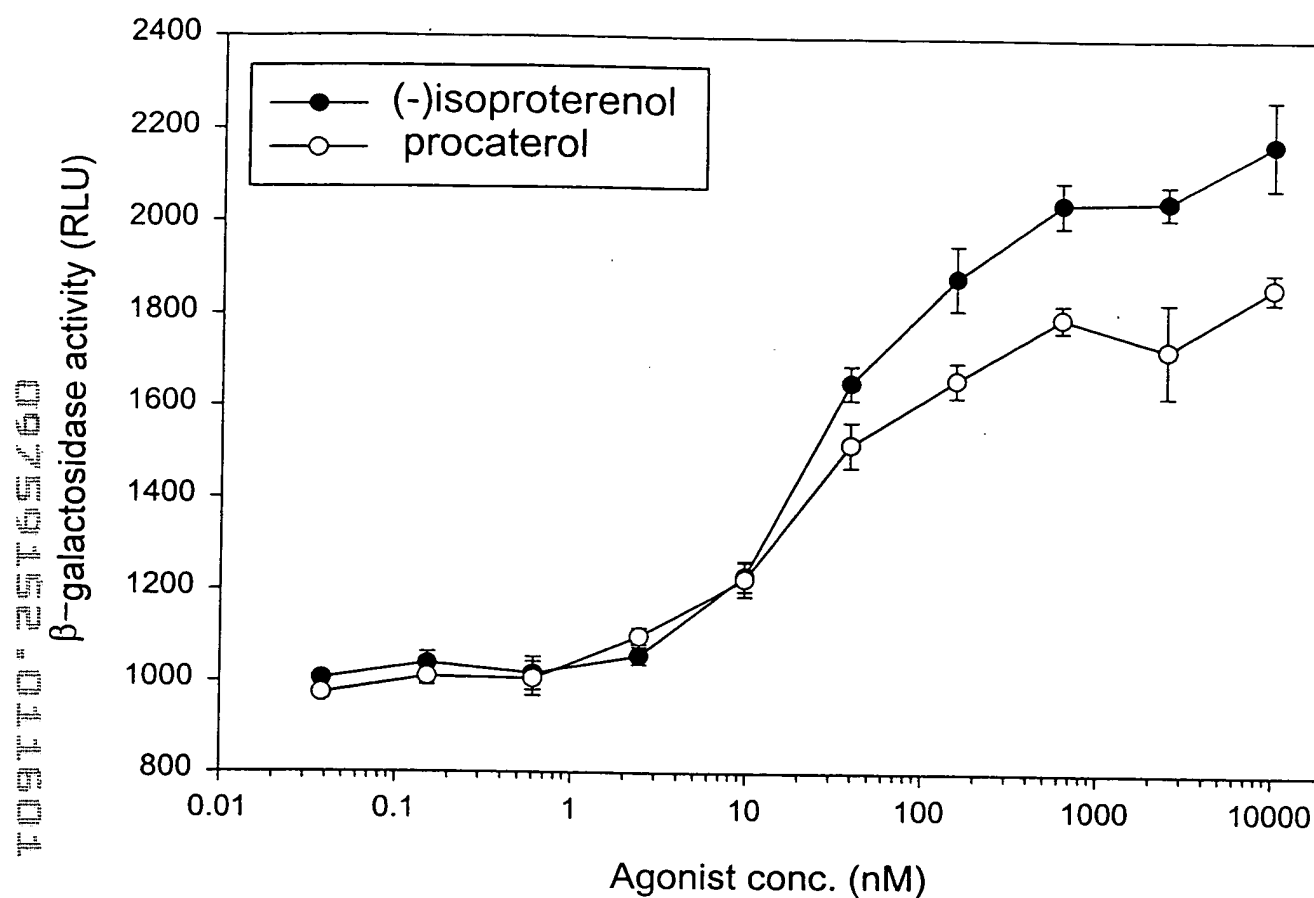


FIGURE 4A

β -galactosidase Activity in Response to Agonist in C2 Cells
Coexpressing β 2AR- β gal $\Delta\alpha$ and β Arrestin1- β gal $\Delta\omega$ Fusion Proteins

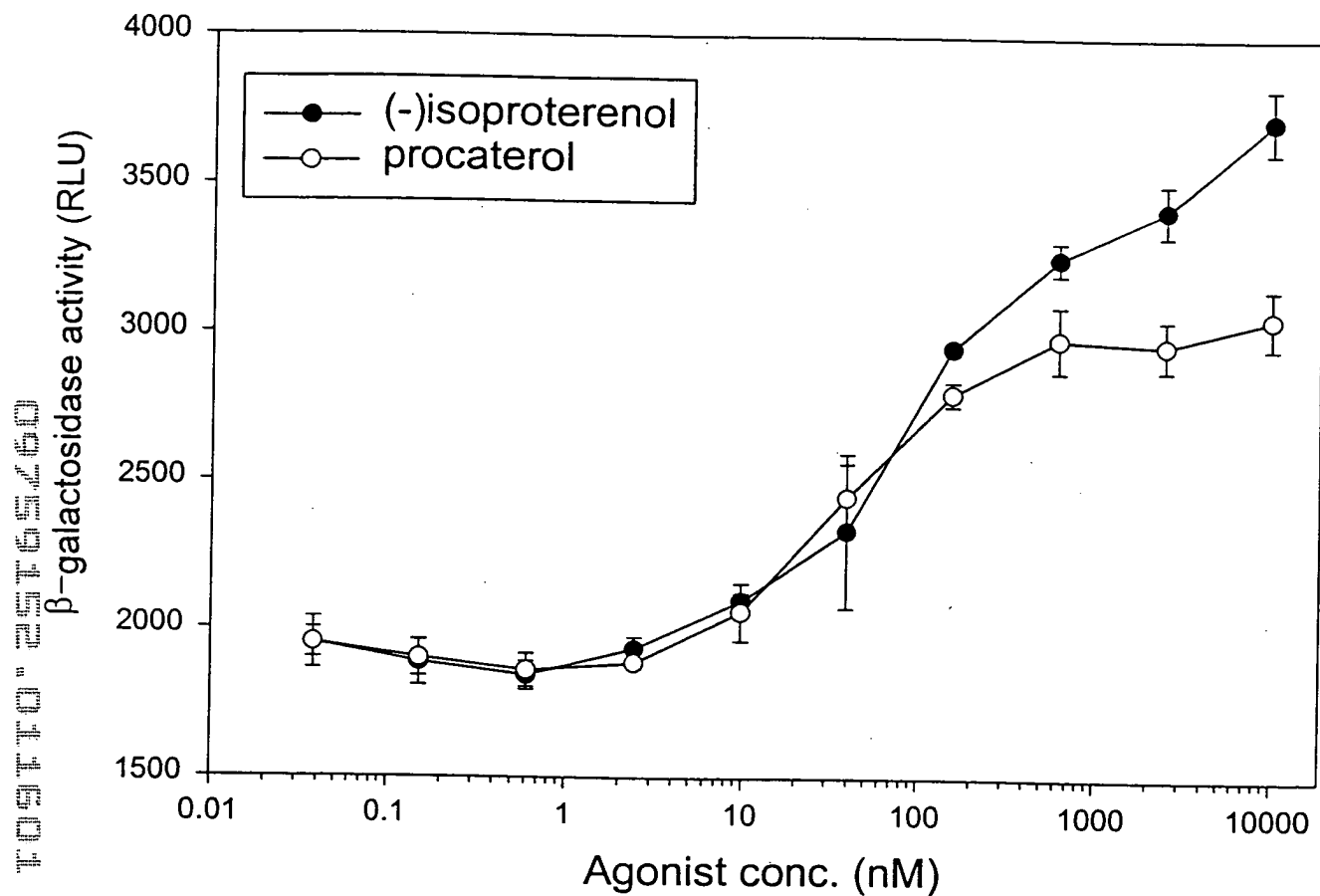


FIGURE 4B

Inhibition of β -galactosidase activity in C2 Cells Coexpressing β 2AR- β gal $\Delta\alpha$ and β Arrestin2- β gal $\Delta\omega$ Fusion Proteins

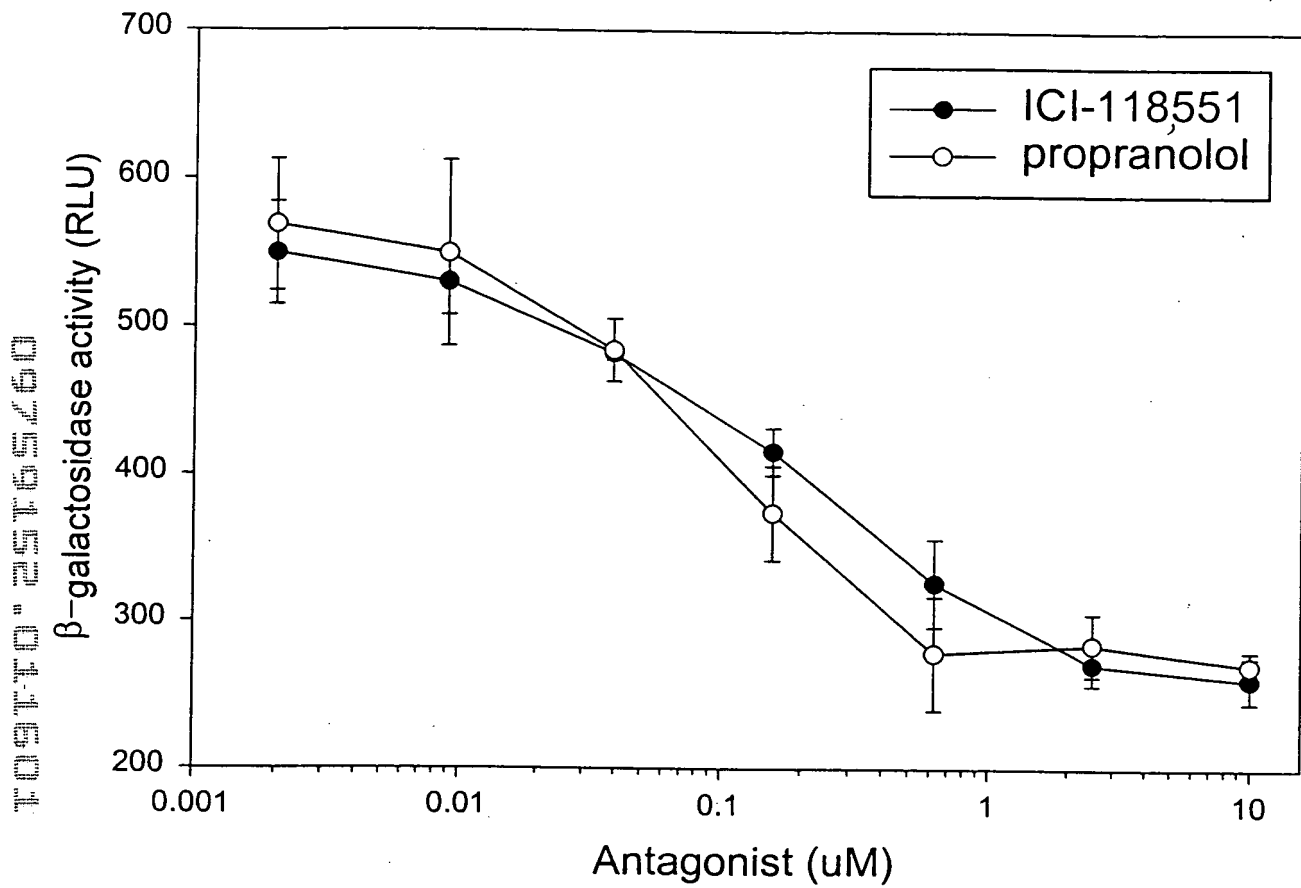


FIGURE 5A

Antagonist Inhibition of β -galactosidase Activity in C2 Cells
Coexpressing β 2AR- β gal $\Delta\alpha$ and β Arrestin1- β gal $\Delta\omega$ Fusion Proteins

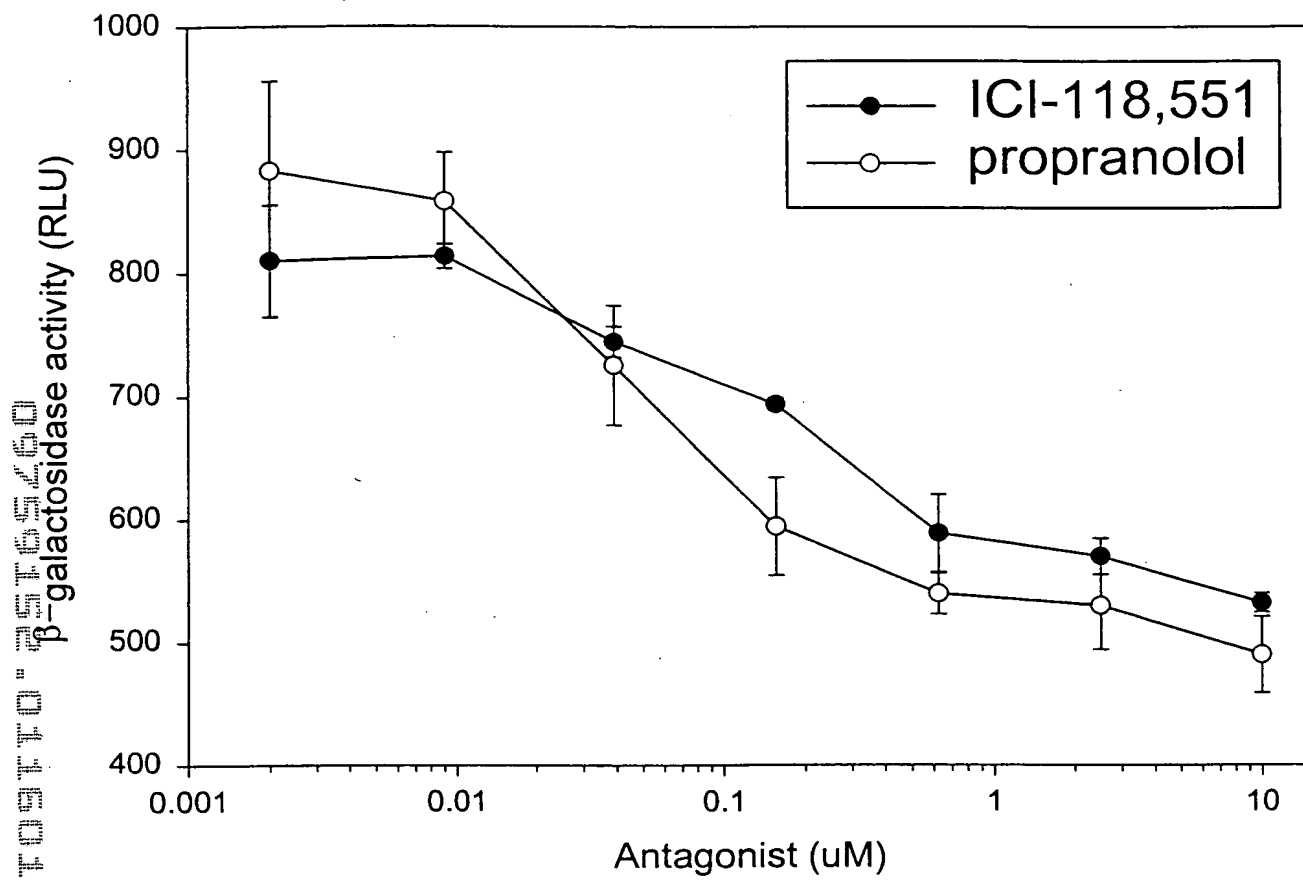


Figure 5B

Agonist Stimulated cAMP Response in Clones or Pools of C2 Cells Coexpressing A2aR- β gal $\Delta\alpha$ and β Arrestin1- β gal $\Delta\omega$ Fusion Proteins

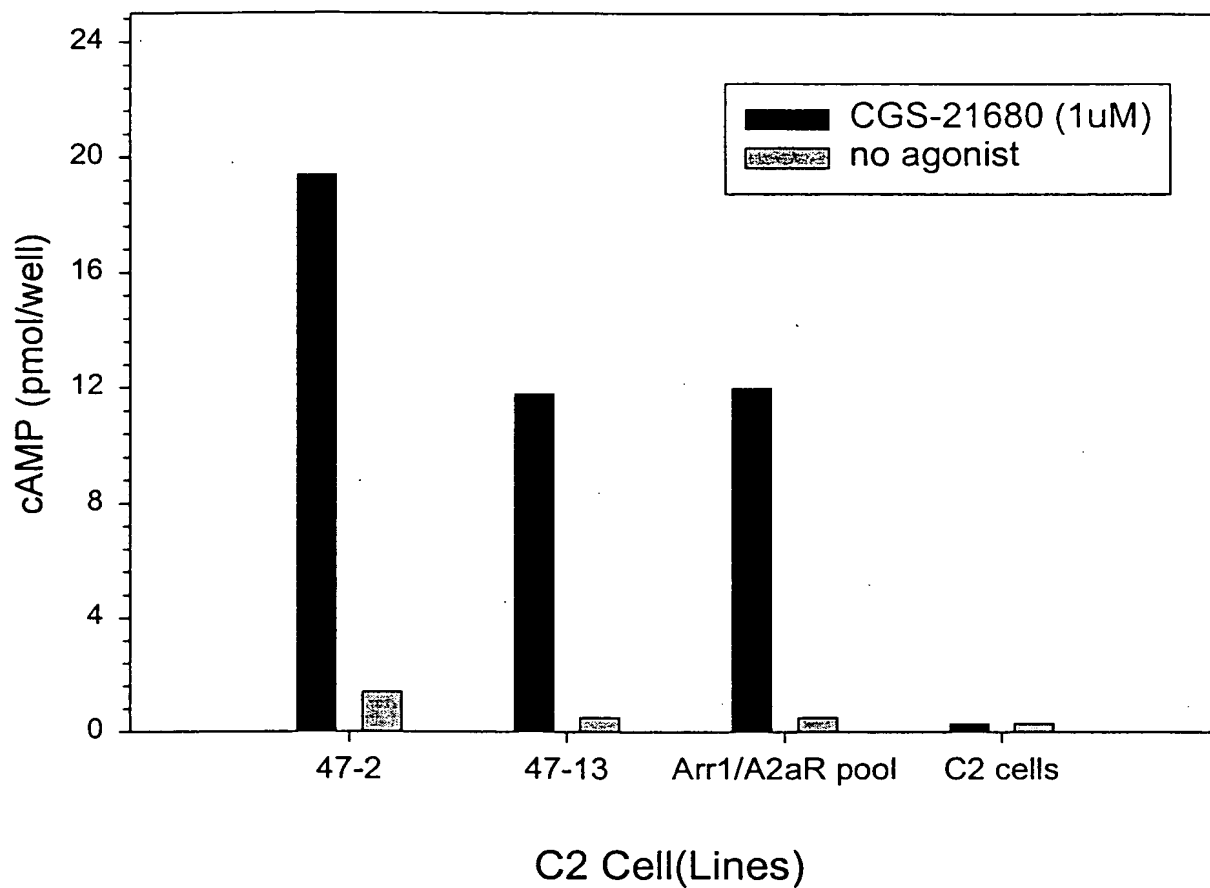


FIGURE 6

Agonist Stimulated cAMP Response in Clones or Pools of C2 Cells Expressing D1- β gal $\Delta\alpha$ and β Arrestin2- β gal $\Delta\omega$ Fusion Proteins

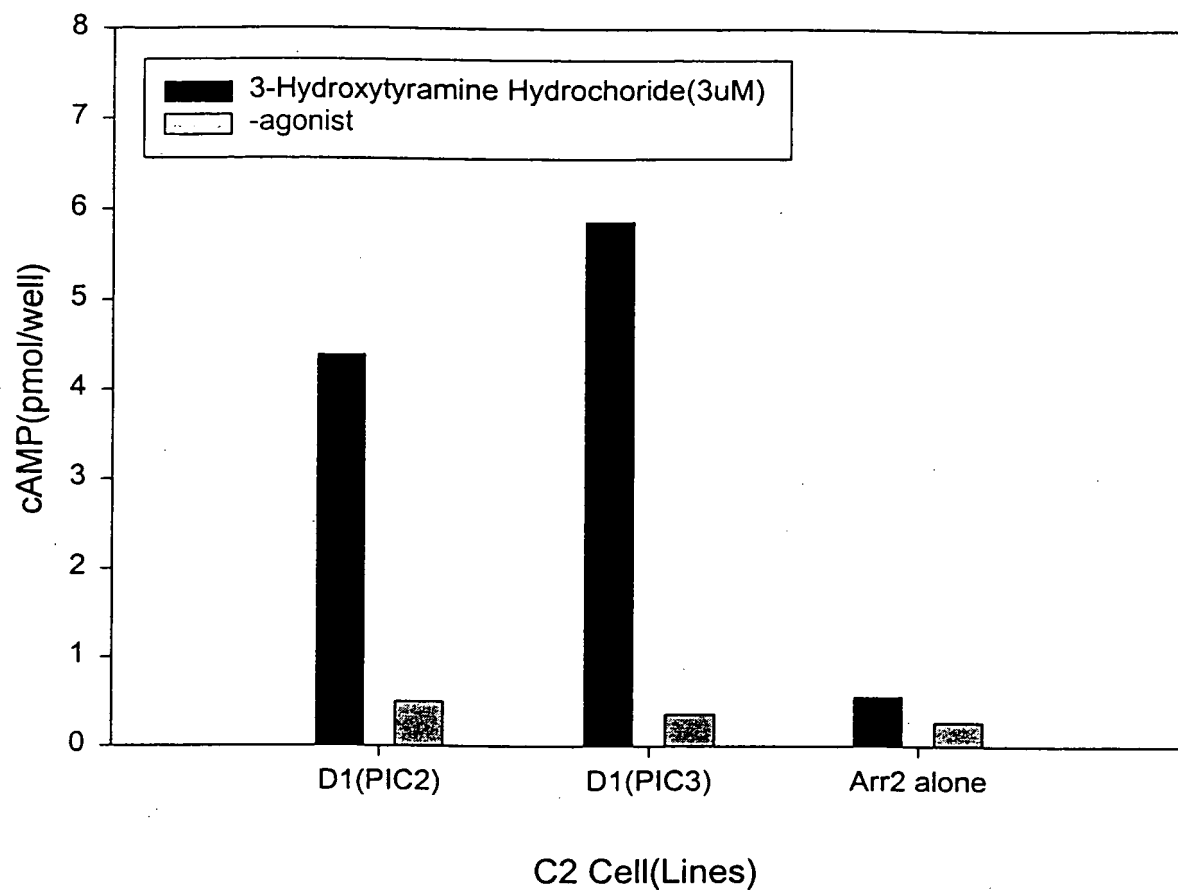


FIGURE 7

**β_2 AR- β gal $\Delta\omega$ and β arr2- β gal $\Delta\alpha$ Interaction in HEK293
Clones in Response to Isoproterenol Treatment (1 μ M)**

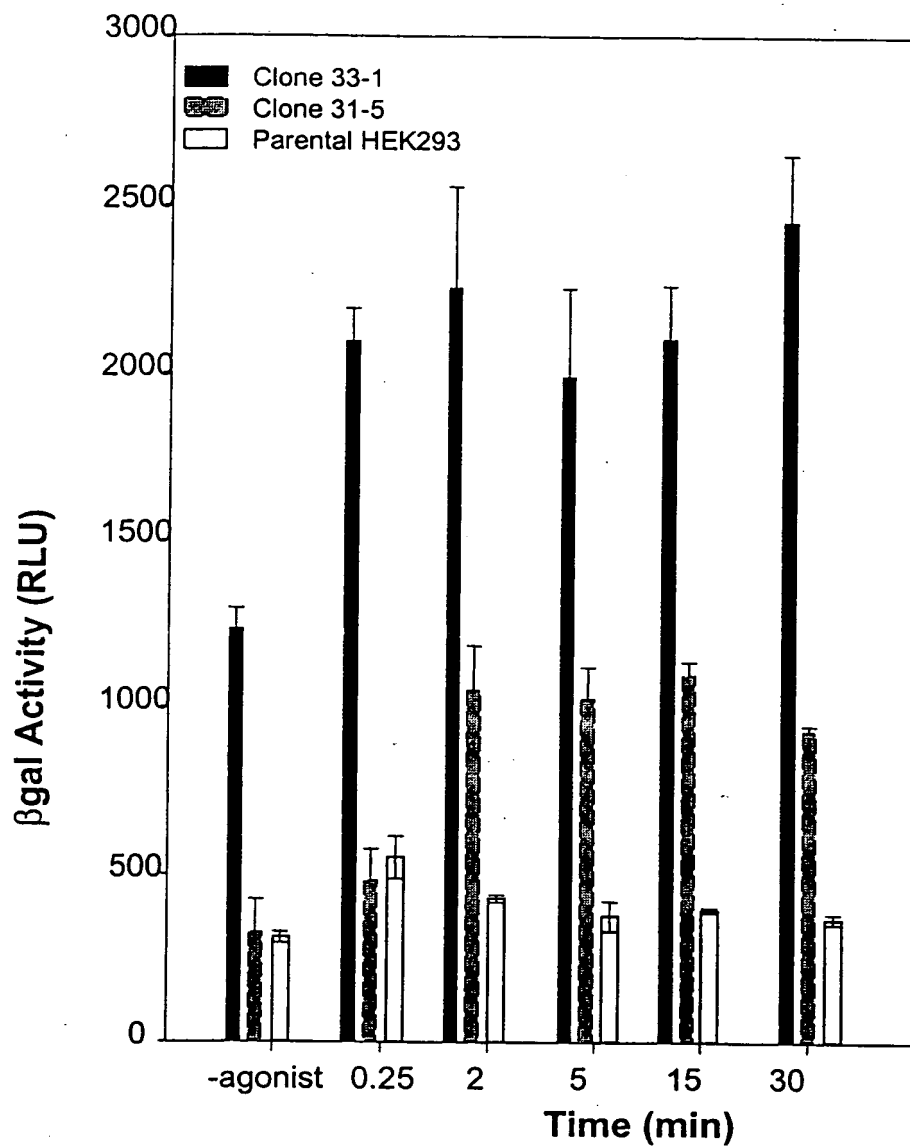


FIGURE 8A

$\beta 2AR$ - $\beta gal\Delta\alpha$ and $\beta Arr1$ - $\beta gal\Delta\omega$ Interaction in a CHO Pool
in Response to Isoproterenol Treatment(10uM)

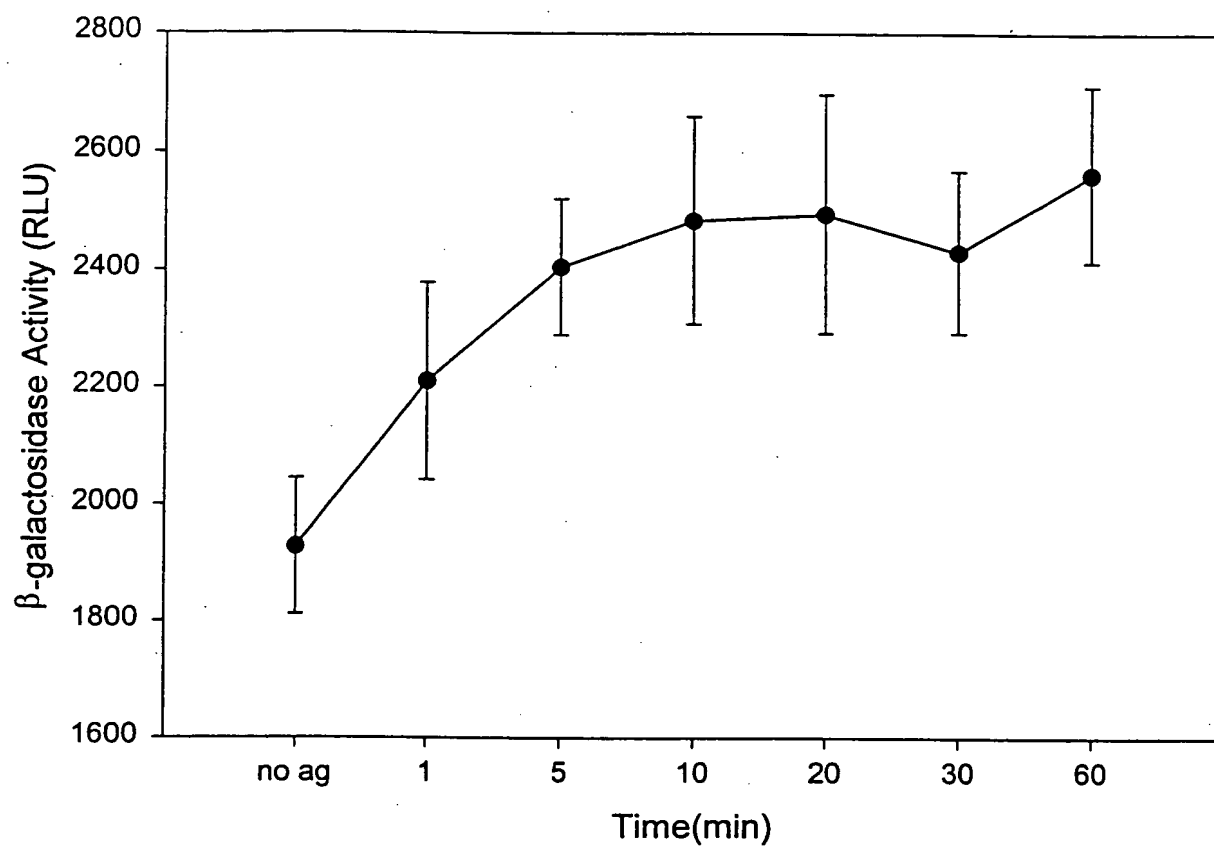


FIGURE 8B

β 2AR- β gal $\Delta\alpha$ and β Arr2- β gal $\Delta\omega$ Interaction in CHW Clone
in Response to Isoproterenol Treatment (10uM)

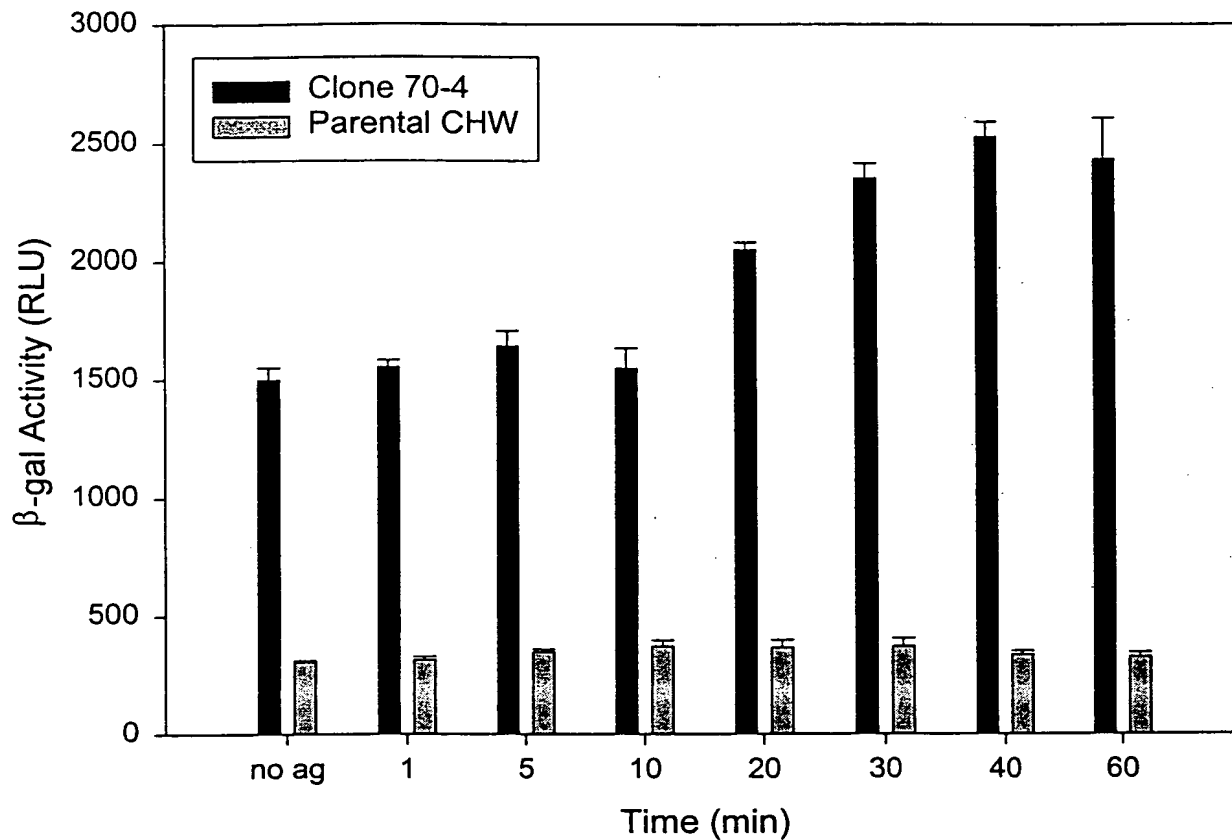


FIGURE 8C

β -galactosidase Complementation as a Measurement for
Adrenergic Receptor Homodimerization in HEK 293 Cells
Coexpressing β 2AR- β gal $\Delta\alpha$ and β 2AR- β gal $\Delta\omega$.

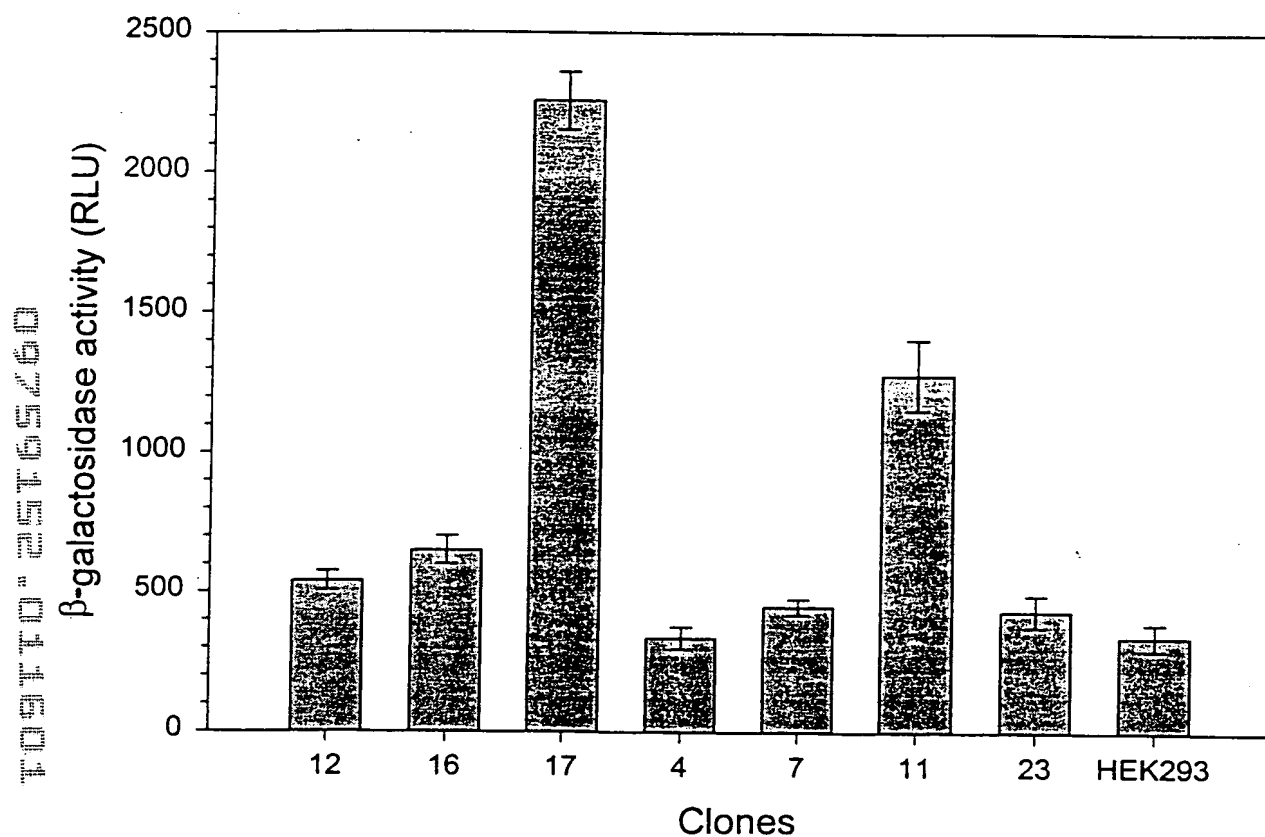


FIGURE 9A

Agonist Stimulated cAMP Response in HEK 293 Cells
Coexpressing $\beta 2AR$ - $\beta gal\Delta\alpha$ and $\beta 2AR$ - $\beta gal\Delta\omega$

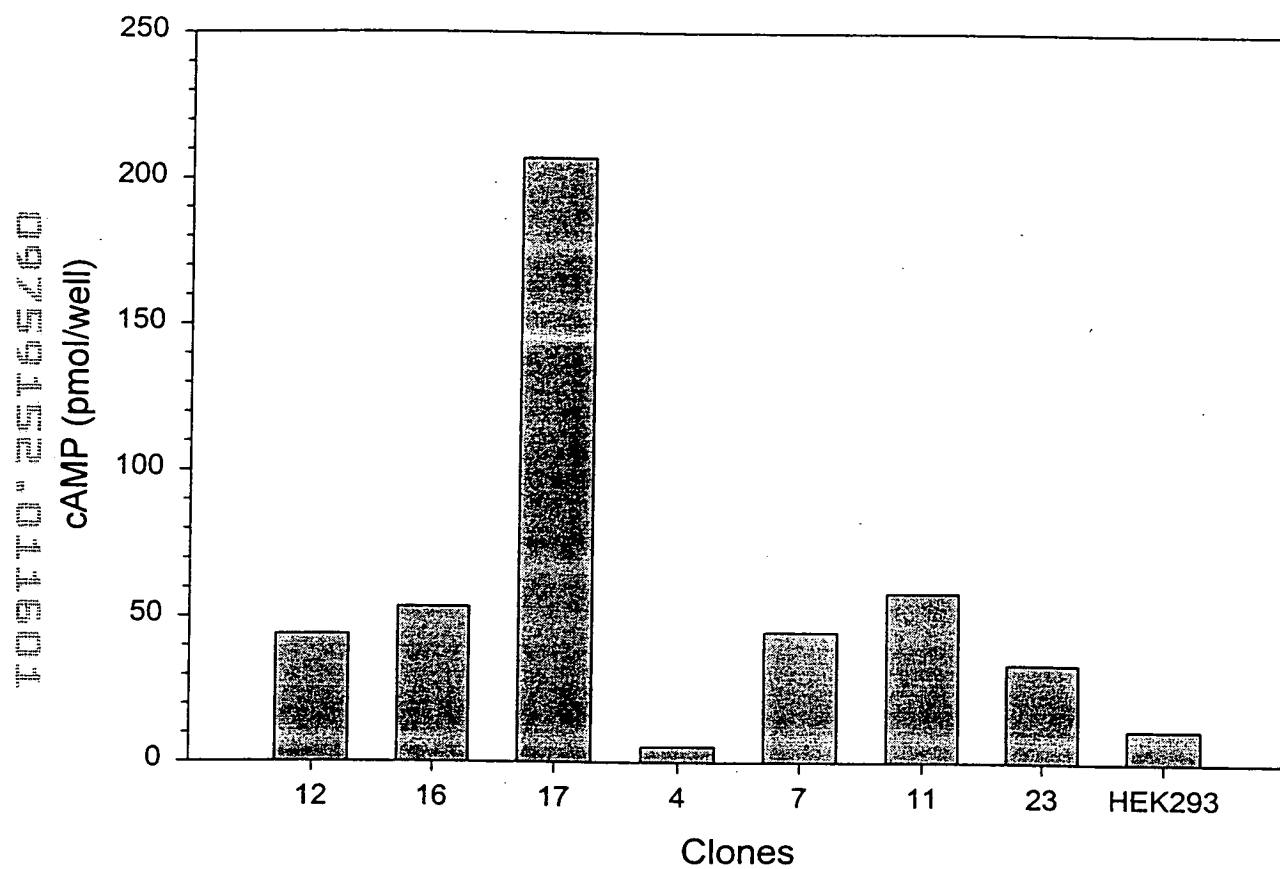


FIGURE 9B

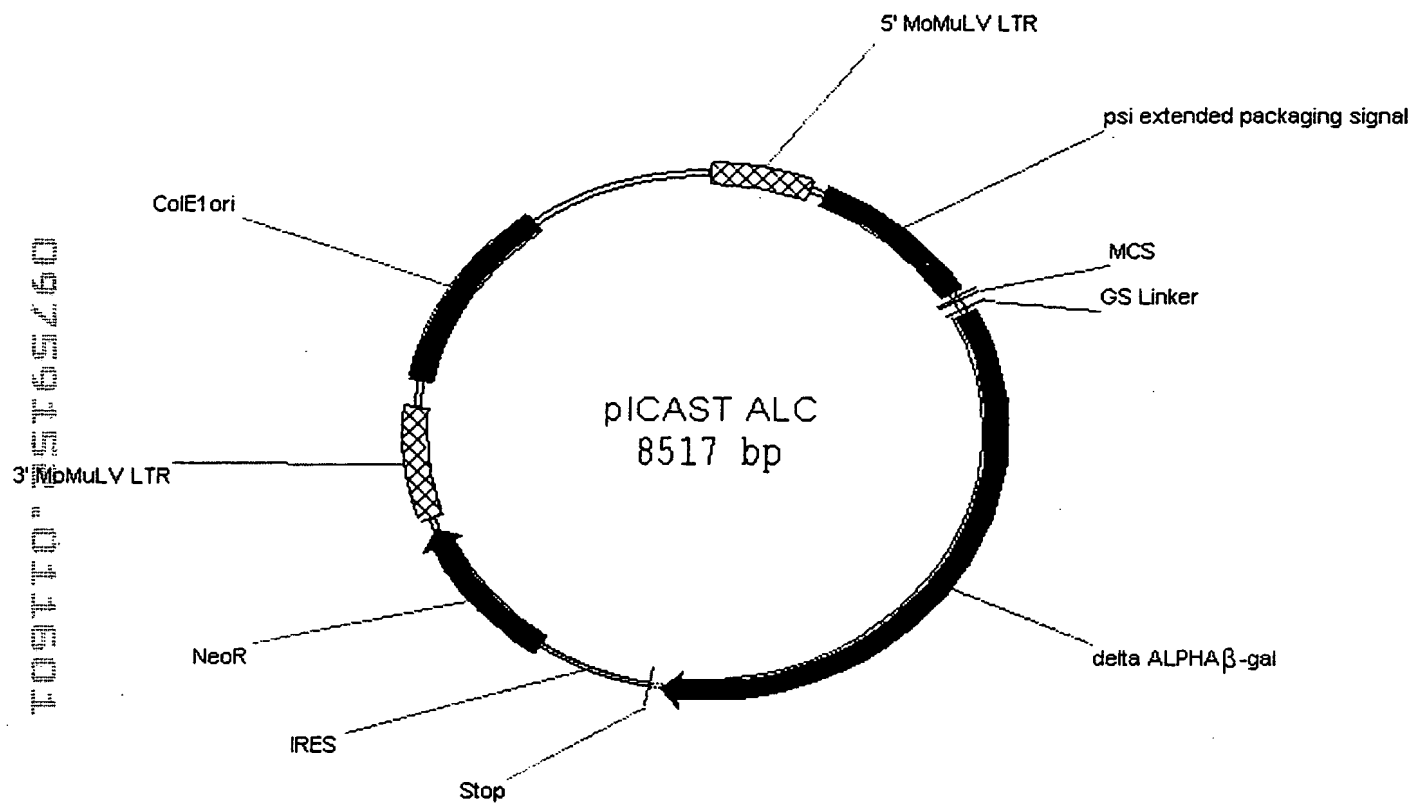


Figure 10A

1	CTGCAGCCTG	AATATGGGCC	AAACAGGATA	TCTGTGGTAA	GCAGTTCCTG
	GACGTCGGAC	TTATACCCGG	TTTGTCTCTAT	AGACACCATT	CGTCAAGGAC

51	CCCCGGCTCA	GGGCCAAGAA	CAGATGGAAC	AGCTGAATAT	GGGCCAAACA
	GGGGCCGAGT	CCCGGTTCTT	GTCTACCTTG	TCGACTTATA	CCCGGTTTGT

101	GGATATCTGT	GGTAAGCAGT	TCCTGCCCCG	GCTCAGGGCC	AAGAACAGAT
	CCTATAGACA	CCATTTCGTA	AGGACGGGGC	CGAGTCCCGG	TTCTTGCTCTA

151	GGTCCCCAGA	TGCGGTCCAG	CCCTCAGCAG	TTTCTAGAGA	ACCATCAGAT
	CCAGGGGTCT	ACGCCAGGTC	GGGAGTCGTC	AAAGATCTCT	TGGTAGTCTA

201	GTTTCCAGGG	TGCCCCAAGG	ACCTGAAATG	ACCCTGTGCC	TTATTTGAAC
	CAAAGGTCCC	ACGGGGTTCC	TGGACTTTAC	TGGGACACGG	AATAAACTTG

251	TAACCAATCA	GTTTCGTTCT	CGCTTCTGTT	CGCGCGCTTC	TGCTCCCCGA
	ATTGGTTAGT	CAAGCGAAGA	GCGAAGACAA	GCGCGCGAAG	ACGAGGGGCT

301	GCTCAATAAA	AGAGCCCACA	ACCCCTCACT	CGGGGCGCCA	GTCCTCCGAT
	CGAGTTATTT	TCTCGGGTGT	TGGGGAGTGA	GCCCCGCGGT	CAGGAGGCTA

351	TGACTGAGTC	GCCCCGGTAC	CCGTGTATCC	AATAAACCCCT	CTTGCACTTG
	ACTGACTCAG	CGGGCCCATG	GGCACATAGG	TTATTTGGGA	GAACGTCAAC

401	CATCCGACTT	GTGGTCTCGC	TGTTCTTTGG	GAGGGTCTCC	TCTGAGTGAT
	GTAGGCTGAA	CACCAGAGCG	ACAAGGAACC	CTCCAGAGG	AGACTCACTA

451	TGACTACCCG	TCAGCGGGGG	TCTTTCATTT	GGGGGCTCGT	CCGGGATCGG
	ACTGATGGGC	AGTCGCCCCC	AGAAAGTAAA	CCCCCGAGCA	GGCCCTAGCC

501	GAGACCCCTG	CCCAGGGACC	ACCGACCCAC	CACCGGGAGG	CAAGCTGGCC
	CTCTGGGGAC	GGGTCCCCTG	TGGCTGGGTG	GTGGCCCTCC	GTTTCGACCGG

551	AGCAACTTAT	CTGTGTCTGT	CCGATTGTCT	AGTGTCTATG	ACTGATTTTA
	TCGTTGAATA	GACACAGACA	GGCTAACAGA	TCACAGATAC	TGACTAAAT

601	TGCGCCTGCG	TCGGTACTAG	TTAGCTAACT	AGCTCTGTAT	CTGGCGGACC
	ACGCGGACGC	AGCCATGATC	AATCGATTGA	TCGAGACATA	GACCGCCTGG

651	CGTGGTGGA	CTGACGAGTT	CTGAACACCC	GGCCGCAACC	CTGGGAGACG
	GCACCACCTT	GACTGCTCAA	GACTTGTTGG	CCGGCGTTGG	GACCTCTGCT

701	TCCCAGGGAC	TTTGGGGGCC	GTTTTTGTGG	CCCAGCTGA	GGAAGGGAGT
	AGGGTCCCTG	AAACCCCGG	CAAAAACACC	GGGCTGGACT	CCTTCCCTCA

751	CGATGTGGAA	TCCGACCCCG	TCAGGATATG	TGGTTCTGGT	AGGAGACGAG
	GCTACACCTT	AGGCTGGGGC	AGTCCTATAC	ACCAAGACCA	TCCTCTGCTC

801	AACCTAAAC	AGTTCCCGCC	TCCGTCTGAA	TTTTTGCTTT	CGGTTTGGA
	TTGGATTTTG	TCAAGGGCGG	AGGCAGACTT	AAAAACGAAA	GCCAAACCTT

851	CCGAAGCCGC	GCGTCTTGTC	TGCTGCAGCA	TCGTTCTGTG	TTGTCTCTGT
	GGCTTCGGCG	CGCAGAACAG	ACGACGTCGT	AGCAAGACAC	AACAGAGACA

901	CTGACTGTGT	TTCTGTATTT	GTCTGAAAAT	TAGGGCCAGA	CTGTTACCAC
	GACTGACACA	AAGACATAAA	CAGACTTTTA	ATCCCGGTCT	GACAATGGTG

FIGURE 10B

```

951  TCCCTTAAGT TTGACCTTAG GTAAGTGGAA AGATGTGGAG CCGCTCGCTC
    AGGGAATTCA AACTGGAATC CATTGACCTT TCTACAGCTC GCCGAGCGAG
-----
1001  ACAACCAGTC GGTAGATGTC AAGAAGAGAC GTTGGGTTAC CTTCTGCTCT
    TGTTGGTCAG CCATCTACAG TTCTTCTCTG CAACCCAATG GAAGACGAGA
-----
1051  GCAGAATGGC CAACCTTTAA CGTCGGATGG CCGCGAGACG GCACCTTTAA
    CGTCTTACCG GTTGGAATT GCAGCCTACC GGCCTCTGCG CGTGGAAATT
-----
1101  CCGAGACCTC ATCACCAGG TTAAGATCAA GGTCTTTTCA CCTGGCCCGC
    GGCTCTGGAG TAGTGGGTCC AATTCTAGTT CCAGAAAAGT GGACCGGGCG
-----
1151  ATGGACACCC AGACCAGGTC CCCTACATCG TGACCTGGGA AGCCTTGGCT
    TACCTGTGGG TCTGGTCCAG GGGATGTAGC ACTGGACCCT TCGGAACCGA
-----
1201  TTTGACCCCC CTCCCTGGGT CAAGCCCTTT GTACACCCTA AGCCTCCGCC
    AAAGTGGGGG GAGGGACCCA GTTCGGGAAA CATGTGGGAT TCGGAGGCGG
-----
1251  TCCTCTTCCT CCATCCGCCC CGTCTCTCCC CCTTGAACCT CCTCGTTCGA
    AGGAGAAGGA GGTAGGCGGG GCAGAGAGGG GGAAGTTGGA GGAGCAAGCT
-----
1301  CCGCGCTCTG ATCCTCCCTT TATCCAGCCC TCACTCCTTC TCTAGGCGCC
    GGGGCGGAGC TAGGAGGGAA ATAGGTCGGG AGTGAGGAAG AGATCCGCGG
-----
1351  GGCCGCTCTA GCCCATTAAT ACGACTCACT ATAGGGCGAT TCGAATCAGG
    CCGGCGAGAT CGGGTAATTA TGCTGAGTGA TATCCCGCTA AGCTTAGTCC
-----
1401  CCTTGGCGCG CCGGATCCTT AATTAAGCGC AATTGGGAGG TGGCGGTAGC
    GGAACCGCGC GGCCTAGGAA TTAATTCGCG TTAACCCTCC ACCGCCATCG
-----
+2      M G V I T D S L A V V A R T D
    ]-----
1451  CTCGAGATGG GCGTGATTAC GGATTCCTG GCCGTCGTGG CCCGCACCGA
    GAGCTCTACC CGCACTAATG CCTAAGTGAC CGGCAGCACC GGGCGTGGCT
-----
+2      R P S Q Q L R S L N G E W R F A
-----
1501  TCGCCCTTCC CAACAGTTAC GCAGCCTGAA TGGCGAATGG CGCTTTCCTT
    AGCGGGAAGG GTTGTCATATG CGTCGGACTT ACCGCTTACC GCGAAACGGA
-----
+2      W F P A P E A V P E S W L E C D L
-----
1551  GGTTCCTCGC ACCAGAAGCG GTGCCGAAA GCTGGCTGGA GTGCGATCTT
    CCAAAGGCCG TGGTCTTCGC CACGGCCTTT CGACCGACCT CACGCTAGAA
-----
+2      P E A D T V V V P S N W Q M H G Y
-----
1601  CCTGAGGCCG ATACTGTCGT CGTCCCCTCA AACTGGCAGA TGCACGGTTA
    GGACTCCGGC TATGACAGCA GCAGGGGAGT TTGACCGTCT ACGTGCCAAT
-----
+2      D A P I Y T N V T Y P I T V N P
-----
1651  CGATGCGCCC ATCTACACCA ACGTGACCTA TCCATTACG GTCAATCCGC
    GCTACGCGGG TAGATGTGGT TGCATGGAT AGGGTAATGC CAGTTAGGCG
-----

```

```

+2 P F V P T E N P T G C Y S L T F N
-----
1701 CGTTTGTTC CACGGAGAAT CCGACGGGTT GTTACTCGCT CACATTTAAT
    GCAAACAAGG GTGCCTCTTA GGCTGCCCAA CAATGAGCGA GTGTAAATTA
-----
+2 V D E S W L Q E G Q T R I I F D G
-----
1751 GTTGATGAAA GCTGGCTACA GGAAGGCCAG ACGCGAATTA TTTTGTATGG
    CAACTACTTT CGACCGATGT CCTTCCGGTC TGCGCTTAAT AAAAATACC
-----
+2 V N S A F H L W C N G R W V G Y
-----
1801 CGTTAACTCG GCGTTTCATC TGTGGTGCAA CGGGCGCTGG GTCGGTTACG
    GCAATTGAGC CGCAAAGTAG ACACCACGTT GCCCGCGACC CAGCCAATGC
-----
+2 G Q D S R L P S E F D L S A F L R
-----
1851 GCCAGGACAG TCGTTTGCCG TCTGAATTTG ACCTGAGCGC ATTTTACGC
    CGGTCCTGTC AGCAAACGGC AGACTTAAAC TGGACTCGCG TAAAAATGCG
-----
+2 A G E N R L A V M V L R W S D G S
-----
1901 GCCGGAGAAA ACCGCCTCGC GGTGATGGTG CTGCGCTGGA GTGACGGCAG
    CGGCCTCTTT TGGCGGAGCG CCACTACCAC GACGCGACCT CACTGCCGTC
-----
+2 Y L E D Q D M W R M S G I F R D
-----
1951 TTATCTGGAA GATCAGGATA TGTGGCGGAT GAGCGGCATT TTCCGTGACG
    AATAGACCTT CTAGTCCTAT ACACCGCCTA CTCGCCGTAA AAGGCACTGC
-----
+2 V S L L H K P T T Q I S D F H V A
-----
2001 TCTCGTTGCT GCATAAACCG ACTACACAAA TCAGCGATTT CCATGTTGCC
    AGAGCAACGA CGTATTTGGC TGATGTGTTT AGTCGCTAAA GGTACAACGG
-----
+2 T R F N D D F S R A V L E A E V Q
-----
2051 ACTCGCTTTA ATGATGATTT CAGCCGCGCT GTACTGGAGG CTGAAGTTCA
    TGAGCGAAAT TACTACTAAA GTCGGCGCGA CATGACCTCC GACTTCAAGT
-----
+2 M C G E L R D Y L R V T V S L W
-----
2101 GATGTGCGGC GAGTTGCGTG ACTACCTACG GGTAACAGTT TCTTTATGGC
    CTACACGCCG CTCAACGCAC TGATGGATGC CCATTGTCAA AGAAATACCG
-----
+2 Q G E T Q V A S G T A P F G G E I
-----
2151 AGGGTGAAAC GCAGGTCGCC AGCGGCACCG CGCCTTTCGG CGGTGAAATT
    TCCCACTTTG CGTCCAGCGG TCGCCGTGGC GCGGAAAGCC GCCACTTTAA
-----
+2 I D E R G G Y A D R V T L R L N V
-----
2201 ATCGATGAGC GTGGTGGTTA TGCCGATCGC GTCACACTAC GTCTGAACGT
    TAGCTACTCG CACCACCAAT ACGGCTAGCG CAGTGTGATG CAGACTTGCA
-----
+2 E N P K L W S A E I P N L Y R A
-----
2251 CGAAAACCCG AAAGTGTGGA GCGCCGAAAT CCCGAATCTC TATCGTGCGG
    GCTTTTGGGC TTTGACCTT CGCGGCTTTA GGGCTTAGAG ATAGCACGCC

```

+2 V V E L H T A D G T L I E A E A C

2301 TGGTTGAACT GCACACCGCC GACGGCACGC TGATTGAAGC AGAAGCCTGC
ACCAACTTGA CGTGTGGCGG CTGCCGTGCG ACTAACTTCG TCTTCGGACG

+2 D V G F R E V R I E N G L L L L N

2351 GATGTCGGTT TCCGCGAGGT GCGGATTGAA AATGGTCTGC TGCTGCTGAA
CTACAGCCAA AGGCGCTCCA CGCCTAACTT TTACCAGACG ACGACGACTT

+2 G K P L L I R G V N R H E H H P

2401 CGGCAAGCCG TTGCTGATTC GAGGCGTTAA CCGTCACGAG CATCATCCTC
GCCGTTTCGC AACGACTAAG CTCCGCAATT GGCAGTGCTC GTAGTAGGAG

+2 L H G Q V M D E Q T M V Q D I L L

2451 TGCATGGTCA GGTGATGGAT GAGCAGACGA TGGTGCAGGA TATCCTGCTG
ACGTACCAGT CCAGTACCTA CTCGTCTGCT ACCACGTCCT ATAGGACGAC

+2 M K Q N N F N A V R C S H Y P N H

2501 ATGAAGCAGA ACAACTTTAA CGCCGTGCGC TGTTTCGCATT ATCCGAACCA
TACTTCGTCT TGTGAAATT GCGGCACGCG ACAAGCGTAA TAGGCTTGGT

+2 P L W Y T L C D R Y G L Y V V D

2551 TCCGCTGTGG TACACGCTGT GCGACCGCTA CGGCCTGTAT GTGGTGGATG
AGGCGACACC ATGTGCGACA CGCTGGCGAT GCCGGACATA CACCACCTAC

+2 E A N I E T H G M V P M N R L T D

2601 AAGCCAATAT TGAAACCCAC GGCATGGTGC CAATGAATCG TCTGACCGAT
TTCGGTTATA ACTTTGGGTG CCGTACCACG GTTACTTAGC AGACTGGCTA

+2 D P R W L P A M S E R V T R M V Q

2651 GATCCGCGCT GGCTACCGGC GATGAGCGAA CGCGTAACGC GAATGGTGCA
CTAGGCGCGA CCGATGGCCG CTACTCGCTT GCGCATTGCG CTTACCACGT

+2 R D R N H P S V I I W S L G N E

2701 GCGCGATCGT AATCACCCGA GTGTGATCAT CTGGTTCGCTG GGAATGAAT
CGCGCTAGCA TTAGTGGGCT CACACTAGTA GACCAGCGAC CCCTTACTTA

+2 S G H G A N H D A L Y R W I K S V

2751 CAGGCCACGG CGCTAATCAC GACGCGCTGT ATCGCTGGAT CAAATCTGTC
GTCCGGTGCC GCGATTAGTG CTGCGCGACA TAGCGACCTA GTTTAGACAG

+2 D P S R P V Q Y E G G G A D T T A

2801 GATCCTTCCC GCCCGGTGCA GTATGAAGGC GGCGGAGCCG ACACCACGGC
CTAGGAAGGG CGGGCCACGT CATACTTCCG CCGCCTCGGC TGTGGTGCCG

+2 T D I I C P M Y A R V D E D Q P

2851 CACCGATATT ATTTGCCCGA TGTACGCGCG CGTGGATGAA GACCAGCCCT
GTGGCTATAA TAAACGGGCT ACATGCGCGC GCACCTACTT CTGGTCGGGA

+2 F P A V P K W S I K K W L S L P G

 2901 TCCCGGCTGT GCCGAAATGG TCCATCAAAA AATGGCTTTC GCTACCTGGA
 AGGCCGACA CGGCTTTACC AGGTAGTTTT TTACCGAAAG CGATGGACCT

 +2 E T R P L I L C E Y A H A M G N S

 2951 GAGACGCGCC CGCTGATCCT TTGCGAATAC GCCCAGCGCA TGGGTAACAG
 CTCTGCGCGG GCGACTAGGA AACGCTTATG CGGGTGCGCT ACCCATTGTC

 +2 L G G F A K Y W Q A F R Q Y P R

 3001 TCTTGGCGGT TTCGCTAAAT ACTGGCAGGC GTTTCGTCAG TATCCCCGTT
 AGAACCGCCA AAGCGATTTA TGACCGTCCG CAAAGCAGTC ATAGGGGGCAA

 +2 L Q G G F V W D W V D Q S L I K Y

 3051 TACAGGGCGG CTTCGTCTGG GACTGGGTGG ATCAGTCGCT GATTAAATAT
 ATGTCCCGCC GAAGCAGACC CTGACCCACC TAGTCAGCGA CTAATTTATA

 +2 D E N G N P W S A Y G G D F G D T

 3101 GATGAAAACG GCAACCCGTG GTCGGCTTAC GGCGGTGATT TTGGCGATAC
 CTACTTTTGC CGTTGGGCAC CAGCCGAATG CCGCCACTAA AACCGCTATG

 +2 P N D R Q F C M N G L V F A D R

 3151 GCCGAACGAT CGCCAGTTCT GTATGAACGG TCTGGTCTTT GCCGACCGCA
 CGGCTTGCTA GCGGTCAAGA CATACTTGCC AGACCAGAAA CGGCTGGCGT

 +2 T P H P A L T E A K H Q Q Q F F Q

 3201 CGCCGCATCC AGCGCTGACG GAAGCAAAAC ACCAGCAGCA GTTTTCCAG
 GCGGCGTAGG TCGCGACTGC CTTCTGTTTTG TGGTCGTCGT CAAAAAGGTC

 +2 F R L S G Q T I E V T S E Y L F R

 3251 TTCCGTTTAT CCGGGCAAAC CATCGAAGTG ACCAGCGAAT ACCTGTTCCG
 AAGGCAAATA GGCCCGTTTG GTAGCTTCAC TGGTCGCTTA TGGACAAGGC

 +2 H S D N E L L H W M V A L D G K

 3301 TCATAGCGAT AACGAGCTCC TGCCTGGAT GGTGGCGCTG GATGGTAAGC
 AGTATCGCTA TTGCTCGAGG ACGTGACCTA CCACCGCGAC CTACCATTCTG

 +2 P L A S G E V P L D V A P Q G K Q

 3351 CGCTGGCAAG CGGTGAAGTG CCTCTGGATG TCGCTCCACA AGGTAAACAG
 GCGACCGTTC GCCACTTCAC GGAGACCTAC AGCGAGGTGT TCCATTTGTC

 +2 L I E L P E L P Q P E S A G Q L W

 3401 TTGATTGAAC TGCCTGAACT ACCGCAGCCG GAGAGCGCCG GGCAACTCTG
 AACTAACTTG ACGGACTTGA TGGCGTCGGC CTCTCGCGGC CCGTTGAGAC

 +2 L T V R V V Q P N A T A W S E A

 3451 GCTCACAGTA CGCGTAGTGC AACCGAACGC GACCGCATGG TCAGAAGCCG
 CGAGTGTCAT GCGCATCAGC TTGGCTTGCG CTGGCGTACC AGTCTTCGGC

+2 G H I S A W Q Q W R L A E N L S V

 3501 GGCACATCAG CGCCTGGCAG CAGTGGCGTC TGGCGGAAAA CCTCAGTGTG
 CCGTG TAGTC GCGGACCGTC GTCACCGCAG ACCGCCTTTT GGAGTCACAC

 +2 T L P A A S H A I P H L T T S E M

 3551 ACGCTCCCCG CCGCGTCCCA CGCCATCCCG CATCTGACCA CCAGCGAAAT
 TGCGAGGGGC GCGCGAGGGT GCGGTAGGGC GTAGACTGGT GGTCGCTTTA

 +2 D F C I E L G N K R W Q F N R Q

 3601 GGATTTTTGC ATCGAGCTGG GTAATAAGCG TTGGCAATTT AACCGCCAGT
 CCTAAAAACG TAGCTCGACC CATTATTGCG AACCGTTAAA TTGGCGGTCA

 +2 S G F L S Q M W I G D K K Q L L T

 3651 CAGGCTTTCT TTCACAGATG TGGATTGGCG ATAAAAACA ACTGCTGACG
 GTCCGAAAGA AAGTGCTAC ACCTAACCGC TATTTTTTGT TGACGACTGC

 +2 P L R D Q F T R A P L D N D I G V

 3701 CCGCTGCGCG ATCAGTTCAC CCGTGCACCG CTGGATAACG ACATTGGCGT
 GCGGACGCGC TAGTCAAGTG GGCACGTGGC GACCTATTGC TGTAACCGCA

 +2 S E A T R I D P N A W V E R W K

 3751 AAGTGAAGCG ACCCGCATTG ACCCTAACGC CTGGGTCGAA CGCTGGAAGG
 TTCATTTCGC TGGGCGTAAC TGGGATTGCG GACCCAGCTT GCGACCTTCC

 +2 A A G H Y Q A E A A L L Q C T A D

 3801 CGGCGGGCCA TTACCAGGCC GAAGCAGCGT TGTTCAGTG CACGGCAGAT
 GCCGCCCGGT AATGGTCCGG CTTCGTCGCA ACAACGTCAC GTGCCGTCTA

 +2 T L A D A V L I T T A H A W Q H Q

 3851 ACATTGCTG ATGCGGTGCT GATTACGACC GCTCACGCGT GGCAGCATCA
 TGTGAACGAC TACGCCACGA CTAATGCTGG CGAGTGCGCA CCGTCGTAGT

 +2 G K T L F I S R K T Y R I D G S

 3901 GGGGAAAACC TTATTTATCA GCCGAAAAC CTACCGGATT GATGGTAGTG
 CCCCTTTTGG AATAAATAGT CGGCCTTTTG GATGGCCTAA CTACCATCAC

 +2 G Q M A I T V D V E V A S D T P H

 3951 GTCAAATGGC GATTACCGTT GATGTTGAAG TGGCGAGCGA TACACCGCAT
 CAGTTTACCG CTAATGGCAA CTACAACTTC ACCGCTCGCT ATGTGGCGTA

 +2 P A R I G L N C Q L A Q V A E R V

 4001 CCGCGCGCGA TTGGCCTGAA CTGCCAGCTG GCGCAGGTAG CAGAGCGGGT
 GGCCGCGCCT AACCGGACTT GACGGTCGAC CGCGTCCATC GTCTCGCCCA

 +2 N W L G L G P Q E N Y P D R L T

 4051 AAAGTGGCTC GGATTAGGGC CGCAAGAAAA CTATCCCGAC CGCCTTACTG
 TTTGACCGAG CCTAATCCCG GCGTTCTTTT GATAGGGCTG GCGGAATGAC

```

+2 A A C F D R W D L P L S D M Y T P
-----
4101 CCGCCTGTTT TGACCGCTGG GATCTGCCAT TGTCAGACAT GTATACCCCG
      GGCGGACAAA ACTGGCGACC CTAGACGGTA ACAGTCTGTA CATATGGGGC
-----
+2 Y V F P S E N G L R C G T R E L N
-----
4151 TACGTCTTCC CGAGCGAAAA CGGTCTGCGC TGCGGGACGC GCGAATTGAA
      ATGCAGAAGG GCTCGCTTTT GCCAGACGCG ACGCCCTGCG CGCTTAACTT
-----
+2 Y G P H Q W R G D F Q F N I S R
-----
4201 TTATGGCCCA CACCACTGGC GCGGCGACTT CCAGTTCAAC ATCAGCCGCT
      AATACCGGGT GTGGTCACCG CGCCGCTGAA GGTCAGTTG TAGTCGGCGA
-----
+2 Y S Q Q Q L M E T S H R H L L H A
-----
4251 ACAGTCAACA GCAACTGATG GAAACCAGCC ATCGCCATCT GCTGCACGCG
      TGTCAGTTGT CGTTGACTAC CTTTGGTCCG TAGCGGTAGA CGACGTGCGC
-----
+2 E E G T W L N I D G F H M G I G G
-----
4301 GAAGAAGGCA CATGGCTGAA TATCGACGGT TTCCATATGG GGATTGGTGG
      CTTCTTCCGT GTACCGACTT ATAGCTGCCA AAGGTATACC CCTAACCACC
-----
+2 D D S W S P S V S A E F Q L S A
-----
4351 CGACGACTCC TGGAGCCCGT CAGTATCGGC GGAATTCCAG CTGAGCGCCG
      GCTGCTGAGG ACCTCGGGCA GTCATAGCCG CCTTAAGGTC GACTCGCGGC
-----
+2 G R Y H Y Q L V W C Q K R S D Y K
-----
4401 GTCGCTACCA TTACCACTTG GTCTGGTGTC AAAAAAGATC TGAATAAAA
      CAGCGATGGT AATGGTCAAC CAGACCACAG TTTTCTTAG ACTGATATT
-----
+2 D E D L D H H H H H H R
-----
4451 GATGAGGACC TCGACCATCA TCATCATCAT CACCGGTAAT AATAGGTAGA
      CTACTCCTGG AGCTGGTAGT AGTAGTAGTA GTGGCCATTA TTATCCATCT
-----
+2
-----
4501 TAAGTGAAGT ATTAGATGCA TTGATCCCTC GACCAATTCC GGTATTATTC
      ATTCATGAC TAATCTACGT AACTAGGGAG CTGGTTAAGG CCAATAAAAG
-----
+2
-----
4551 CACCATATTG CCGTCTTTTG GCAATGTGAG GGCCCGGAAA CCTGGCCCTG
      GTGGTATAAC GGCAGAAAAC CGTTACACTC CCGGGCCTTT GGACCGGGAC
-----
+2
-----
4601 TCTTCTTGAC GAGCATTCTT AGGGGTCTTT CCCCTCTCGC CAAAGGAATG
      AGAAGAACTG CTCGTAAGGA TCCCAGAAA GGGGAGAGCG GTTTCCTTAC
-----
+2
-----
4651 CAAGGTCTGT TGAATGTCGT GAAGGAAGCA GTTCCTCTGG AAGCTTCTTG
      GTTCCAGACA ACTTACAGCA CTCCTTCGT CAAGGAGACC TTCGAAGAAC
-----
+2
-----
4701 AAGACAAACA ACGTCTGTAG CGACCCTTTG CAGGCAGCGG AACCCCCAC
      TTCTGTTTGT TGCAGACATC GCTGGGAAAC GTCCGTCGCC TTGGGGGTG
-----
+2
-----
4751 CTGGCGACAG GTGCCTCTGC GGCCAAAAGC CACGTGTATA AGATACACCT
      GACCGCTGTC CACGGAGACG CCGGTTTTCG GTGCACATAT TCTATGTGGA
-----

```


4801	GCAAAGGCGG	CACAACCCCA	GTGCCACGTT	GTGAGTTGGA	TAGTTGTGGA
	CGTTTCCGCC	GTGTTGGGGT	CACGGTGCAA	CACTCAACCT	ATCAACACCT
4851	AAGAGTCAAA	TGGCTCTCCT	CAAGCGTATT	CAACAAGGGG	CTGAAGGATG
	TTCTCAGTTT	ACCGAGAGGA	GTTTCGCATAA	GTTGTTCCCC	GACTTCCTAC
4901	CCCAGAAGGT	ACCCCATTGT	ATGGGATCTG	ATCTGGGGCC	TCGGTGCACA
	GGGTCTTCCA	TGGGGTAACA	TACCCTAGAC	TAGACCCCGG	AGCCACGTGT
4951	TGCTTTACAT	GTGTTTAGTC	GAGGTTAAAA	AACGTCTAGG	CCCCCGAAC
	ACGAAATGTA	CACAAATCAG	CTCCAATTTT	TTGCAGATCC	GGGGGGCTTG
5001	CACGGGGACG	TGGTTTTCTT	TTGAAAAACA	CGATGATAAT	ACCATGATTG
	GTGCCCCCTG	ACCAAAAGGA	AACTTTTTGT	GCTACTATTA	TGGTACTAAC
5051	AACAAGATGG	ATTGCACGCA	GGTTCCTCCG	CCGCTTGGGT	GGAGAGGCTA
	TTGTTCTACC	TAACGTGCGT	CCAAGAGGCC	GGCGAACCCA	CCTCTCCGAT
5101	TTCGGCTATG	ACTGGGCACA	ACAGACAATC	GGCTGCTCTG	ATGCCGCCGT
	AAGCCGATAC	TGACCCGTGT	TGTCTGTTAG	CCGACGAGAC	TACGGCGGCA
5151	GTTCCGGCTG	TCAGCGCAGG	GGCGCCCGGT	TCTTTTGTG	AAGACCGACC
	CAAGGCCGAC	AGTCGCGTCC	CCGCGGGCCA	AGAAAAACAG	TTCTGGCTGG
5201	TGTCCGGTGC	CCTGAATGAA	CTGCAGGACG	AGGCAGCGCG	GCTATCGTGG
	ACAGGCCACG	GGACTTACTT	GACGTCCTGC	TCCGTGCGCG	CGATAGCACC
5251	CTGGCCACGA	CGGGCGTTCC	TTGCGCAGCT	GTGCTCGACG	TTGTCACTGA
	GACCGGTGCT	GCCCGCAAGG	AACGCGTCGA	CACGAGCTGC	AACAGTGAAT
5301	AGCGGGAAGG	GAATGGCTGC	TATTGGGCGA	AGTGCCGGGG	CAGGATCTCC
	TCGCCCTTCC	CTGACCGACG	ATAACCCGCT	TCACGGCCCC	GTCTAGAGG
5351	TGTCATCTCA	CCTTGCTCCT	GCCGAGAAAG	TATCCATCAT	GGCTGATGCA
	ACAGTAGAGT	GGAACGAGGA	CGGCTCTTTC	ATAGGTAGTA	CCGACTACGT
5401	ATGCGGCGGC	TGCATACGCT	TGATCCGGCT	ACCTGCCCAT	TCGACCACCA
	TACGCCGCCG	ACGTATGCGA	ACTAGGCCGA	TGGACGGGTA	AGCTGGTGGT
5451	AGCGAAACAT	CGCATCGAGC	GAGCACGTAC	TCGGATGGAA	GCCGGTCTTG
	TCGCTTTGTA	GCGTAGCTCG	CTCGTGCATG	AGCCTACCTT	CGGCCAGAAC
5501	TCGATCAGGA	TGATCTGGAC	GAAGAGCATC	AGGGGCTCGC	GCCAGCCGAA
	AGCTAGTCCT	ACTAGACCTG	CTTCTCGTAG	TCCCCGAGCG	CGGTGCGCTT
5551	CTGTTGCGCA	GGCTCAAGGC	GCGCATGCCC	GACGGCGAGG	ATCTCGTCGT
	GACAAGCGGT	CCGAGTTCCG	GCGGTACGGG	CTGCCGCTCC	TAGAGCAGCA
5601	GACCCATGGC	GATGCCTGCT	TGCCGAATAT	CATGGTGGAA	AATGGCCGCT
	CTGGGTACCG	CTACGGACGA	ACGGCTTATA	GTACCACCTT	TTACCGGCGA
5651	TTTCTGGATT	CATCGACTGT	GGCCGGCTGG	GTGTGGCGGA	CCGCTATCAG
	AAAGACCTAA	GTAGCTGACA	CCGGCCGACC	CACACCGCCT	GGCGATAGTC
5701	GACATAGCGT	TGGCTACCCG	TGATATTGCT	GAAGAGCTTG	GCGGCGAATG
	CTGTATCGCA	ACCGATGGGC	ACTATAACGA	CTTCTCGAAC	CGCCGCTTAC

5751	GGCTGACCGC	TTCCTCGTGC	TTTACGGTAT	CGCCGCTCCC	GATTGCGAGC
	CCGACTGGCG	AAGGAGCACG	AAATGCCATA	GCGGCGAGGG	CTAAGCGTCG

5801	GCATCGCCTT	CTATCGCCTT	CTTGACGAGT	TCTTCTGAGC	GGGACTCTGG
	CGTAGCGGAA	GATAGCGGAA	GAAGTGTCTA	AGAAGACTCG	CCCTGAGACC

5851	GGTTCGCATC	GATAAAATAA	AAGATTTTAT	TTAGTCTCCA	GAAAAAGGGG
	CCAAGCGTAG	CTATTTTATT	TTCTAAAATA	AATCAGAGGT	CTTTTTCCCC

5901	GGAATGAAAG	ACCCACCTG	TAGGTTTGGC	AAGCTAGCTT	AAGTAACGCC
	CCTTACTTTC	TGGGGTGGAC	ATCCAAACCG	TTCGATCGAA	TTCATTGCGG

5951	ATTTTGCAAG	GCATGGAAAA	ATACATAACT	GAGAATAGAG	AAGTTCAGAT
	TAAAACGTTT	CGTACCTTTT	TATGTATTGA	CTCTTATCTC	TTCAAGTCTA

6001	CAAGGTCAGG	AACAGATGGA	ACAGCTGAAT	ATGGGCCAAA	CAGGATATCT
	GTTCCAGTCC	TTGTCTACCT	TGTCGACTTA	TACCCGGTTT	GTCCTATAGA

6051	GTGGTAAGCA	GTTCTGCCCC	CGGCTCAGGG	CCAAGAACAG	ATGGAACAGC
	CACCATTCGT	CAAGGACGGG	GCCGAGTCCC	GGTTCTTGTC	TACCTTGTCG

6101	TGAATATGGG	CCAAACAGGA	TATCTGTGGT	AAGCAGTTCC	TGCCCCGGCT
	ACTTATACCC	GGTTTGTCTT	ATAGACACCA	TTCGTCAAGG	ACGGGGCCGA

6151	CAGGGCCAAG	AACAGATGGT	CCCCAGATGC	GGTCCAGCCC	TCAGCAGTTT
	GTCCCGGTTT	TTGTCTACCA	GGGGTCTACG	CCAGGTGCGG	AGTCGTCAAA

6201	CTAGAGAACC	ATCAGATGTT	TCCAGGGTGC	CCCAAGGACC	TGAAATGACC
	GATCTCTTGG	TAGTCTACAA	AGGTCCCACG	GGGTTCTTGG	ACTTTACTGG

6251	CTGTGCCTTA	TTTGAATAA	CCAATCAGTT	CGCTTCTCGC	TTCTGTTTCG
	GACACGGAAT	AAACTTGATT	GGTTAGTCAA	GCGAAGAGCG	AAGACAAGCG

6301	GCGCTTCTGC	TCCCCGAGCT	CAATAAAAGA	GCCCCACAACC	CCTCACTCGG
	CGCGAAGACG	AGGGGCTCGA	GTTATTTTCT	CGGGTGTTGG	GGAGTGAGCC

6351	GCGGCCAGTC	CTCCGATTGA	CTGAGTCGCC	CGGGTACCCG	TGTATCCAAT
	CCGCGGTCAG	GAGGCTAACT	GACTCAGCGG	GCCCATGGGC	ACATAGGTTA

6401	AAACCCCTCTT	GCAGTTGCAT	CCGACTTGTC	GTCTCGCTGT	TCCTTGGGAG
	TTTGGGAGAA	CGTCAACGTA	GGCTGAACAC	CAGAGCGACA	AGGAACCCCT

6451	GGTCTCCTCT	GAGTGATTGA	CTACCCGTCA	GCGGGGGTCT	TTCATTCATG
	CCAGAGGAGA	CTACTAACT	GATGGGCAGT	CGCCCCCAGA	AAGTAAGTAC

6501	CAGCATGTAT	CAAAATTAAT	TTGGTTTTTT	TTCTTAAGTA	TTTACATTAA
	GTCGTACATA	GTTTTAATTA	AACCAAAAAA	AAGAATTCAT	AAATGTAATT

6551	ATGGCCATAG	TTGCATTAAT	GAATCGGCCA	ACGCGCGGGG	AGAGGCGGTT
	TACCGGTATC	AACGTAATTA	CTTAGCCGGT	TGCGCGCCCC	TCTCCGCCAA

6601	TGCGTATTGG	CGCTCTTCCG	CTTCCTCGCT	CACTGACTCG	CTGCGCTCGG
	ACGCATAACC	GCGAGAAGGC	GAAGGAGCGA	GTGACTGAGC	GACGCGAGCC

6651	TCGTTCGGCT	GCGGCGAGCG	GTATCAGCTC	ACTCAAAGGC	GGTAATACGG
	AGCAAGCCGA	CGCCGCTCGC	CATAGTCGAG	TGAGTTTCCG	CCATTATGCC

69759152.011601
T09T0"25T65Z60

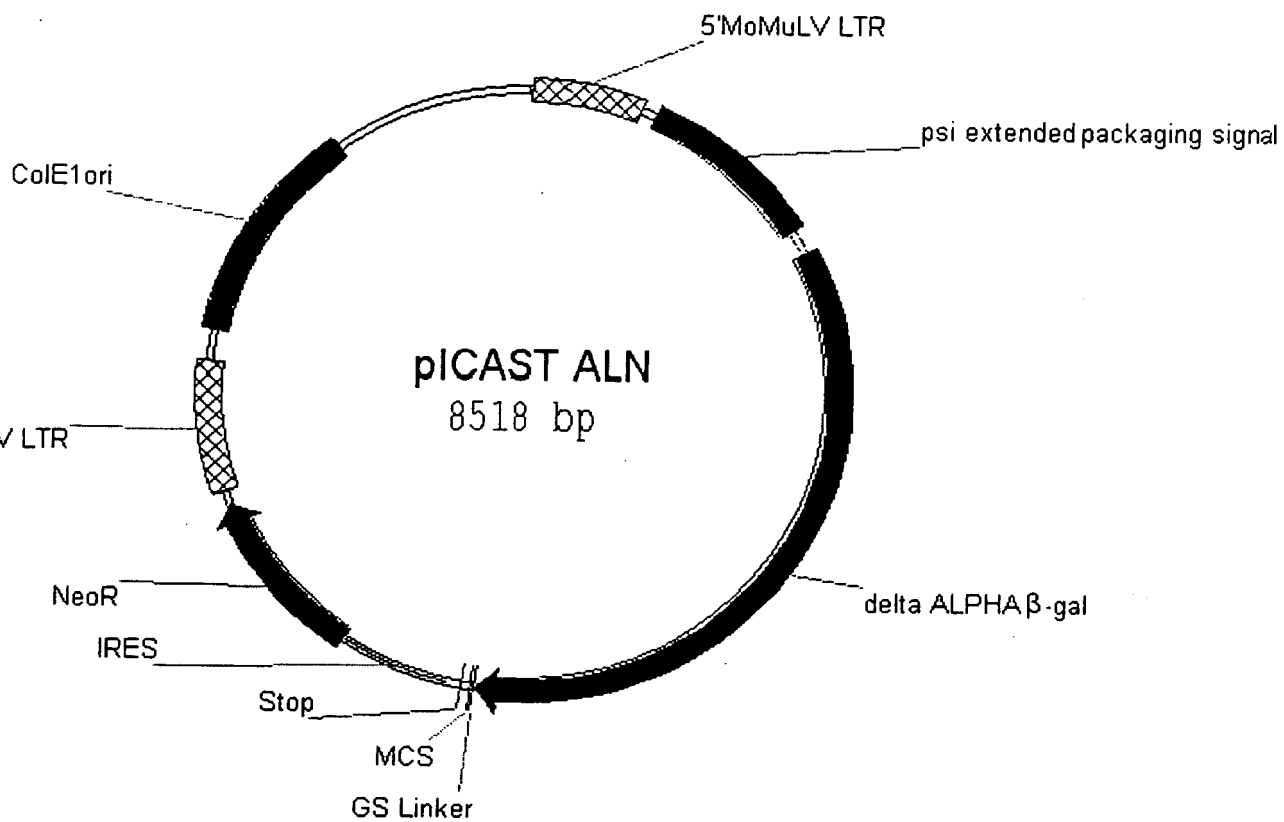


Figure 11A

1	CTGCAGCCTG	AATATGGGCC	AAACAGGATA	TCTGTGGTAA	GCAGTTCCTG
	GACGTCGGAC	TTATACCCGG	TTGTCTCTAT	AGACACCATT	CGTCAAGGAC

51	CCCCGGCTCA	GGGCCAAGAA	CAGATGGAAC	AGCTGAATAT	GGGCCAAACA
	GGGGCCGAGT	CCCGGTTCTT	GTCTACCTTG	TCGACTTATA	CCCGGTTTGT

101	GGATATCTGT	GGTAAGCAGT	TCCTGCCCCG	GCTCAGGGCC	AAGAACAGAT
	CCTATAGACA	CCATTTCGTC	AGGACGGGGC	CGAGTCCCGG	TTCTTGCTA

151	GGTCCCCAGA	TGCGGTCCAG	CCCTCAGCAG	TTTCTAGAGA	ACCATCAGAT
	CCAGGGGTCT	ACGCCAGGTC	GGGAGTCGTC	AAAGATCTCT	TGGTAGTCTA

201	GTTTCCAGGG	TGCCCCAAGG	ACCTGAAATG	ACCCTGTGCC	TTATTTGAAC
	CAAAGGTCCC	ACGGGGTTCC	TGGACTTTAC	TGGGACACGG	AATAAACTTG

251	TAACCAATCA	GTTTCGTTCT	CGCTTCTGTT	CGCGCGCTTC	TGCTCCCCGA
	ATTGGTTAGT	CAAGCGAAGA	GCGAAGACAA	GCGCGCGAAG	ACGAGGGGCT

301	GCTCAATAAA	AGAGCCCACA	ACCCCTCACT	CGGGGCGCCA	GTCCTCCGAT
	CGAGTTATTT	TCTCGGGTGT	TGGGGAGTGA	GCCCCGCGGT	CAGGAGGCTA

351	TGACTGAGTC	GCCCCGGTAC	CCGTGTATCC	AATAAACCCCT	CTTGCAGTTG
	ACTGACTCAG	CGGGCCCATG	GGCACATAGG	TTATTTGGA	GAACGTCAAC

401	CATCCGACTT	GTGGTCTCGC	TGTTCTTGG	GAGGGTCTCC	TCTGAGTGAT
	GTAGGCTGAA	CACCAGAGCG	ACAAGGAACC	CTCCAGAGG	AGACTCACTA

451	TGACTACCCG	TCAGCGGGGG	TCTTTCATTT	GGGGGCTCGT	CCGGGATCGG
	ACTGATGGGC	AGTCGCCCCC	AGAAAGTAAA	CCCCGAGCA	GGCCCTAGCC

501	GAGACCCCTG	CCCAGGGACC	ACCGACCCAC	CACCGGGAGG	CAAGCTGGCC
	CTCTGGGGAC	GGGTCCCTGG	TGGCTGGGTG	GTGGCCCTCC	GTTTCGACCGG

551	AGCAACTTAT	CTGTGTCTGT	CCGATTGTCT	AGTGTCTATG	ACTGATTTTA
	TCGTTGAATA	GACACAGACA	GGCTAACAGA	TCACAGATAC	TGACTAAAAT

601	TGCGCCTGCG	TCGGTACTAG	TTAGCTAACT	AGCTCTGTAT	CTGGCGGACC
	ACGCGGACGC	AGCCATGATC	AATCGATTGA	TCGAGACATA	GACCGCCTGG

651	CGTGGTGGA	CTGACGAGTT	CTGAACACCC	GGCCGCAACC	CTGGGAGACG
	GCACCACCTT	GACTGCTCAA	GACTTGTGGG	CCGGCGTTGG	GACCCTCTGC

701	TCCCAGGGAC	TTTGGGGGCC	GTTTTTGTGG	CCCGACCTGA	GGAAGGGAGT
	AGGGTCCCTG	AAACCCCCGG	CAAAAACACC	GGGCTGGACT	CCTTCCCTCA

751	CGATGTGGAA	TCCGACCCCG	TCAGGATATG	TGGTTCTGGT	AGGAGACGAG
	GCTACACCTT	AGGCTGGGGC	AGTCCTATAC	ACCAAGACCA	TCCTCTGCTC

801	AACCTAAAAC	AGTTCCCGCC	TCCGTCTGAA	TTTTTGCTTT	CGGTTTGGA
	TTGGATTTTG	TCAAGGGCGG	AGGCAGACTT	AAAAACGAAA	GCCAAACCTT

851	CCGAAGCCGC	GCGTCTTGTC	TGCTGCAGCA	TCGTTCTGTG	TTGTCTCTGT
	GGCTTCGGCG	CGCAGAACAG	ACGACGTCGT	AGCAAGACAC	AACAGAGACA

901	CTGACTGTGT	TTCTGTATTT	GTCTGAAAAT	TAGGGCCAGA	CTGTTACCAC
	GACTGACACA	AAGACATAAA	CAGACTTTTA	ATCCCGGTCT	GACAATGGTG

FIGURE 11B

951	TCCCTTAAGT AGGGAATTCA	TTGACCTTAG AACTGGAATC	GTAAGTGGAA CATTGACCTT	AGATGTCGAG TCTACAGCTC	CGGCTCGCTC GCCGAGCGAG
1001	ACAACCAGTC TGTTGGTCAG	GGTAGATGTC CCATCTACAG	AAGAAGAGAC TTCTTCTCTG	GTTGGGTTAC CAACCCAATG	CTTCTGCTCT GAAGACGAGA
1051	GCAGAATGGC CGTCTTACCG	CAACCTTTAA GTTGGAAATT	CGTCGGATGG GCAGCCTACC	CCGCGAGACG GGCGCTCTGC	GCACCTTTAA CGTGGAAATT
1101	CCGAGACCTC GGCTCTGGAG	ATCACCCAGG TAGTGGGTCC	TTAAGATCAA AATTCTAGTT	GGTCTTTTCA CCAGAAAAGT	CCTGGCCCGC GGACCGGGCG
1151	ATGGACACCC TACCTGTGGG	AGACCAGGTC TCTGGTCCAG	CCCTACATCG GGGATGTAGC	TGACCTGGGA ACTGGACCCT	AGCCTTGCT TCGGAACCGA
1201	TTTGACCCCC AAACTGGGGG	CTCCCTGGGT GAGGGACCCA	CAAGCCCTTT GTTTCGGGAA	GTACACCCTA CATGTGGGAT	AGCCTCCGCC TCGGAGGCGG
1251	TCCTCTTCCT AGGAGAAGGA	CCATCCGCCC GGTAGGCGGG	CGTCTCTCCC GCAGAGAGGG	CCTTGAACCT GGAAGTTGGA	CCTCGTTCGA GGAGCAAGCT
1301	CCCCGCCTCG GGGGCGGAGC	ATCCTCCCTT TAGGAGGGAA	TATCCAGCCC ATAGGTCGGG	TCACTCCTTC AGTGAGGAAG	TCTAGGCGCC AGATCCGCGG
1351	GGCCGCTCTA CCGGCGAGAT	GCCCATTAA CGGGTAATTA	ACGACTCACT TGCTGAGTGA	ATAGGGCGAT TATCCCGCTA	TCGAACACCA AGCTTGTTGG
1401	TGCACCATCA ACGTGGTAGT	TCATCATCAC AGTAGTAGTG	GTCGACTATA CAGCTGATAT	AAGATGAGGA TTCTACTCCT	CCTCGAGATG GGAGCTCTAC
1451	GGCGTGATTA CCGCACTAAT	CGGATTCACT GCCTAAGTGA	GGCCGTCGTG CCGGCAGCAC	GCCCGCACCG CGGGCGTGGC	ATCGCCCTTC TAGCGGGAAG
1501	CCAACAGTTA GGTTGTCAAT	CGCAGCCTGA GCGTCGGACT	ATGGCGAATG TACCGCTTAC	GCGCTTTGCC CGCGAAACGG	TGGTTTCCGG ACCAAAGGCC
1551	CACCAGAAGC GTGGTCTTCG	GGTGCCGGAA CCACGGCCTT	AGCTGGCTGG TCGACCGACC	AGTGCGATCT TCACGCTAGA	TCCTGAGGCC AGGACTCCGG
1601	GATACTGTCG CTATGACAGC	TCGTCCCCTC AGCAGGGGAG	AAACTGGCAG TTTGACCGTC	ATGCACGGTT TACGTGCCAA	ACGATGCGCC TGCTACGCGG
1651	CATCTACACC GTAGATGTGG	AACGTGACCT TTGCACTGGA	ATCCCATTAC TAGGGTAATG	GGTCAATCCG CCAGTTAGGC	CCGTTTGTTT GGCAAACAAG
1701	CCACGGAGAA GGTGCCTCTT	TCCGACGGGT AGGCTGCCCA	TGTTACTCGC ACAATGAGCG	TCACATTTAA AGTGTAATTT	TGTTGATGAA ACAATACTT
1751	AGCTGGCTAC TCGACCGATG	AGGAAGGCCA TCCTTCCGGT	GACGCGAATT CTGCGCTTAA	ATTTTTGATG TAAAAACTAC	GCGTTAACTC CGCAATTGAG
1801	GGCGTTTTCAT CCGCAAAGTA	CTGTGGTGCA GACACCACGT	ACGGGCGCTG TGCCCGCGAC	GGTCGGTTAC CCAGCCAATG	GGCCAGGACA CCGGTCCTGT
1851	GTCGTTTGCC CAGCAAACGG	GTCTGAATTT CAGACTTAAA	GACCTGAGCG CTGGACTCGC	CATTTTTTACG GTAAAAATGC	CGCCGGAGAA GCGGCCTCTT

1901	AACCGCCTCG TTGGCGGAGC	CGGTGATGGT GCCACTACCA	GCTGCGCTGG CGACCGGACC	AGTGACGGCA TCACTGCCGT	GTTATCTGGA CAATAGACCT

1951	AGATCAGGAT TCTAGTCCTA	ATGTGGCGGA TACACCGCCT	TGAGCGGCAT ACTCGCCGTA	TTTCCGTGAC AAAGGCACTG	GTCTCGTTGC CAGAGCAACG

2001	TGCATAAACC ACGTATTTGG	GACTACACAA CTGATGTGTT	ATCAGCGATT TAGTCGCTAA	TCCATGTTGC AGGTACAACG	CACTCGCTTT GTGAGCGAAA

2051	AATGATGATT TTACTACTAA	TCAGCCGCGC AGTCGGCGCG	TGTACTGGAG ACATGACCTC	GCTGAAGTTC CGACTTCAAG	AGATGTGCGG TCTACACGCC

2101	CGAGTTGCGT GCTCAACGCA	GACTACCTAC CTGATGGATG	GGGTAACAGT CCCATTTGTCA	TTCTTTATGG AAGAAATACC	CAGGGTGAAA GTCCCACTTT

2151	CGCAGGTCGC GCGTCCAGCG	CAGCGGCACC GTCGCCGTGG	GCGCCTTTTCG CGCGGAAAGC	GCGGTGAAAT CGCCACTTTA	TATCGATGAG ATAGCTACTC

2201	CGTGGTGGTT GCACCACCAA	ATGCCGATCG TACGGCTAGC	CGTCACACTA GCAGTGTGAT	CGTCTGAACG GCAGACTTGC	TCGAAAACCC AGCTTTTGCG

2251	GAAACTGTGG CTTTGACACC	AGCGCCGAAA TCGCGCTTTT	TCCCGAATCT AGGGCTTAGA	CTATCGTGCG GATAGCACGC	GTGGTTGAAC CACCAACTTG

2301	TGCACACCGC ACGTGTGGCG	CGACGGCACG GCTGCCGTGC	CTGATTGAAG GACTAACTTC	CAGAAGCCTG GTCTTCGGAC	CGATGTCGGT GCTACAGCCA

2351	TTCCGCGAGG AAGGCGCTCC	TGCGGATTGA ACGCCTAAC	AAATGGTCTG TTTACCAGAC	CTGCTGCTGA GACGACGACT	ACGGCAAGCC TGCCGTTCCG

2401	GTTGCTGATT CAACGACTAA	CGAGGCGTTA GCTCCGCAAT	ACCGTCACGA TGGCAGTGCT	GCATCATCCT CGTAGTAGGA	CTGCATGGTC GACGTACCAG

2451	AGGTCATGGA TCCAGTACCT	TGAGCAGACG ACTCGTCTGC	ATGGTGCAGG TACCACGTCC	ATATCCTGCT TATAGGACGA	GATGAAGCAG CTACTTCGTC

2501	AACAACCTTTA TTGTTGAAAT	ACGCCGTGCG TGCGGCACGC	CTGTTTCGCAT GACAAGCGTA	TATCCGAACC ATAGGCTTGG	ATCCGCTGTG TAGGCGACAC

2551	GTACACGCTG CATGTGCGAC	TGCGACCGCT ACGCTGGCGA	ACGGCCTGTA TGCCGGACAT	TGTGGTGGAT ACACCACCTA	GAAGCCAATA CTTCGGTTAT

2601	TTGAAACCCA AACTTTGGGT	CGGCATGGTG GCCGTACCAC	CCAATGAATC GGTTACTTAG	GTCTGACCGA CAGACTGGCT	TGATCCGCGC ACTAGGCGCG

2651	TGGCTACCGG ACCGATGGCC	CGATGAGCGA GCTACTCGCT	ACGCGTAACG TGCGCATTGC	CGAATGGTGC GCTTACCACG	AGCGCGATCG TCGCGCTAGC

2701	TAATCACCCG ATTAGTGGGC	AGTGTGATCA TCACACTAGT	TCTGGTCGCT AGACCAGCGA	GGGGAATGAA CCCCTTACTT	TCAGGCCACG AGTCCGGTGC

2751	GCGCTAATCA CGCGATTAGT	CGACGCGCTG GCTGCGCGAC	TATCGCTGGA ATAGCGACCT	TCAAATCTGT AGTTTAGACA	CGATCCTTCC GCTAGGAAGG

2801	CGCCCGGTGC GCGGGCCACG	AGTATGAAGG TCATACTTCC	CGGCGGAGCC GCCGCTCGG	GACACCACGG CTGTGGTGCC	CCACCGATAT GGTGGCTATA

2851	TATTTGCCCC ATAAACGGGC	ATGTACGCGC TACATGCGCG	GCGTGGATGA CGCACCTACT	AGACCAGCCC TCTGGTCGGG	TTCCCGGCTG AAGGGCCGAC
2901	TGCCGAAATG ACGGCTTTAC	GTCCATCAAA CAGGTAGTTT	AAATGGCTTT TTTACCGAAA	CGCTACCTGG GCGATGGACC	AGAGACGCGC TCTCTGCGCG
2951	CCGCTGATCC GGCGACTAGG	TTTGCGAATA AAACGCTTAT	CGCCACGCG GCGGGTGCGC	ATGGGTAAACA TACCCATTGT	GTCTTGCGCG CAGAACCGCC
3001	TTTCGCTAAA AAAGCGATTT	TACTGGCAGG ATGACCGTCC	CGTTTCGTCA GCAAAGCAGT	GTATCCCCGT CATAGGGGCA	TTACAGGGCG AATGTCCCGC
3051	GCTTCGTCTG CGAAGCAGAC	GGACTGGGTG CCTGACCCAC	GATCAGTCGC CTAGTCAGCG	TGATTAAATA ACTAATTTAT	TGATGAAAAC ACTACTTTTG
3101	GGCAACCCGT CCGTGCGGCA	GGTCGGCTTA CCAGCCGAAT	CGGCGGTGAT GCCGCCACTA	TTTGCGGATA AAACCGCTAT	CGCCGAACGA GCGGCTTGCT
3151	TCGCCAGTTC AGCGGTCAAG	TGTATGAACG ACATACTTGC	GTCTGGTCTT CAGACCAGAA	TGCCGACCGC ACGGCTGGCG	ACGCCGCATC TGCGGCGTAG
3201	CAGCGCTGAC GTCGCGACTG	GGAAGCAAAA CCTTCGTTTT	CACCAGCAGC GTGGTCGTCG	AGTTTTTCCA TCAAAAAGGT	GTTCCGTTTA CAAGGCAAAT
3251	TCCGGGCAAA AGGCCCGTTT	CCATCGAAGT GGTAGCTTCA	GACCAGCGAA CTGGTCGCTT	TACCTGTTCC ATGGACAAGG	GTCATAGCGA CAGTATCGCT
3301	TAACGAGCTC ATTGCTCGAG	CTGCACTGGA GACGTGACCT	TGGTGGCGCT ACCACCGCGA	GGATGGTAAG CCTACCATTG	CCGCTGGCAA GGCGACCGTT
3351	GCGGTGAAAGT CGCCACTTCA	GCCTCTGGAT CGGAGACCTA	GTCGCTCCAC CAGCGAGGTG	AAGGTAAACA TTCCATTGTG	GTTGATTGAA CAACTAACTT
3401	CTGCCTGAAC GACGGACTTG	TACCGCAGCC ATGGCGTCGG	GGAGAGCGCC CCTCTCGCGG	GGGCAACTCT CCCGTTGAGA	GGCTCACAGT CCGAGTGTCA
3451	ACGCGTAGTG TGCGCATCAC	CAACCGAACG GTTGGCTTGC	CGACCGCATG GCTGGCGTAC	GTCAGAAGCC CAGTCTTCGG	GGGCACATCA CCCGTGTAGT
3501	GCGCCTGGCA CGCGGACCGT	GCAGTGGCGT CGTCAACGCA	CTGGCGGAAA GACCGCCTTT	ACCTCAGTGT TGGAGTCACA	GACGCTCCCC CTGCGAGGGG
3551	GCCGCGTCCC CGGCGCAGGG	ACGCCATCCC TGCGGTAGGG	GCATCTGACC CGTAGACTGG	ACCAGCGAAA TGTCGCTTTT	TGGATTTTTG ACCTAAAAAC
3601	CATCGAGCTG GTAGCTCGAC	GGTAATAAGC CCATTATTGC	GTTGGCAATT CAACCGTTAA	TAACCGCCAG ATTGGCGGTC	TCAGGCTTTC AGTCCGAAAG
3651	TTTCACAGAT AAAGTGCTTA	GTGGATTGGC CACCTAACCG	GATAAAAAAC CTATTTTTTG	AACTGCTGAC TTGACGACTG	GCCGCTGCGC CGGCGACGCG
3701	GATCAGTTCA CTAGTCAAGT	CCCGTGCACC GGGCACGTGG	GCTGGATAAC CGACCTATTG	GACATTGGCG CTGTAACCGC	TAAGTGAAGC ATTCACCTCG
3751	GACCCGCATT CTGGGCGTAA	GACCCTAACG CTGGGATTGC	CCTGGGTCGA GGACCCAGCT	ACGCTGGAAG TGCGACCTTC	GCGGCGGGCC CGCCGCCCCG

3801	ATTACCAGGC	CGAAGCAGCG	TTGTTGCAGT	GCACGGCAGA	TACACTTGCT
	TAATGGTCCG	GCTTCGTGCG	AACAACGTCA	CGTGCCGTCT	ATGTGAACGA

3851	GATGCGGTGC	TGATTACGAC	CGCTCACGCG	TGGCAGCATC	AGGGGAAAAC
	CTACGCCACG	ACTAATGCTG	GCGAGTGCGC	ACCGTCGTAG	TCCCCTTTTG

3901	CTTATTTATC	AGCCGGAAAA	CCTACCGGAT	TGATGGTAGT	GGTCAAATGG
	GAATAAATAG	TCGGCCTTTT	GGATGGCCTA	ACTACCATCA	CCAGTTTACC

3951	CGATTACCGT	TGATGTTGAA	GTGGCGAGCG	ATACACCGCA	TCCGGCGCGG
	GCTAATGGCA	ACTACAACCT	CACCGCTCGC	TATGTGGCGT	AGGCCGCGCC

4001	ATTGGCCTGA	ACTGCCAGCT	GGCGCAGGTA	GCAGAGCGGG	TAAACTGGCT
	TAACCGGACT	TGACGGTCGA	CCGCGTCCAT	CGTCTCGCCC	ATTTGACCGA

4051	CGGATTAGGG	CCGCAAGAAA	ACTATCCCGA	CCGCCTTACT	GCCGCCTGTT
	GCCTAATCCC	GGCGTTCTTT	TGATAGGGCT	GGCGGAATGA	CGGCGGACAA

4101	TTGACCGCTG	GGATCTGCCA	TTGTCAGACA	TGTATACCCC	GTACGTCTTC
	AACTGGCGAC	CCTAGACGGT	AACAGTCTGT	ACATATGGGG	CATGCAGAAG

4151	CCGAGCGAAA	ACGGTCTGCG	CTGCGGGACG	CGCGAATTGA	ATTATGGCCC
	GGCTCGCTTT	TGCCAGACGC	GACGCCCTGC	GCGCTTAAC	TAATACCGGG

4201	ACACCAGTGG	CGCGGCGACT	TCCAGTTCAA	CATCAGCCGC	TACAGTCAAC
	TGTGGTCACC	GCGCCGCTGA	AGGTCAAGTT	GTAGTCGGCG	ATGTCAGTTG

4251	AGCAACTGAT	GGAACCAGC	CATCGCCATC	TGCTGCACGC	GGAAGAAGGC
	TCGTTGACTA	CCTTTGGTCG	GTAGCGGTAG	ACGACGTGCG	CCTTCTTCCG

4301	ACATGGCTGA	ATATCGACGG	TTTCCATATG	GGGATTGGTG	GCGACGACTC
	TGTACCGACT	TATAGCTGCC	AAAGGTATAC	CCCTAACCA	CGCTGCTGAG

4351	CTGGAGCCCC	TCAGTATCGG	CGGAATTCCA	GCTGAGCGCC	GGTCGCTACC
	GACCTCGGGC	AGTCATAGCC	GCCTTAAGGT	CGACTCGCGG	CCAGCGATGG

4401	ATTACCAGTT	GGTCTGGTGT	CAAAAAAGAT	CTGGAGGTGG	TGGCAGCAGG
	TAATGGTCAA	CCAGACCACA	GTTTTTTCTA	GACCTCCACC	ACCGTCGTCC

4451	CCTTGGCGCG	CCGGATCCTT	AATTAACAAT	TGACCGGTAA	TAATAGGTAG
	GGAACCGCGC	GGCCTAGGAA	TTAATTGTTA	ACTGGCCATT	ATTATCCATC

4501	ATAAGTGACT	GATTAGATGC	ATTGATCCCT	CGACCAATTC	CGGTTATTTT
	TATTCAGTGA	CTAATCTACG	TAAGTAGGGA	GCTGGTTAAG	GCCAATAAAA

4551	CCACCATATT	GCCGTCTTTT	GGCAATGTGA	GGGCCCCGAA	ACCTGGCCCT
	GGTGGTATAA	CGGCAGAAAA	CCGTTACACT	CCCGGGCCTT	TGGACCGGGA

4601	GTCTTCTTGA	CGAGCATTCC	TAGGGGTCTT	TCCCCTCTCG	CCAAAGGAAT
	CAGAAGAACT	GCTCGTAAGG	ATCCCCAGAA	AGGGGAGAGC	GGTTTCCTTA

4651	GCAAGGTCTG	TTGAATGTCG	TGAAGGAAGC	AGTTCCTCTG	GAAGCTTCTT
	CGTTCAGAC	AACTTACAGC	ACTTCCTTCG	TCAAGGAGAC	CTTCGAAGAA

4701	GAAGACAAAC	AACGTCTGTA	GCGACCCTTT	GCAGGCAGCG	GAACCCCCCA
	CTTCTGTTTG	TTGCAGACAT	CGCTGGGAAA	CGTCCGTCGC	CTTGGGGGGT

4751	CCTGGCGACA GGACCGCTGT	GGTGCCTCTG CCACGGAGAC	CGGCCAAAAG GCCGGTTTTC	CCACGTGTAT GGTGCACATA	AAGATACACC TTCTATGTGG
4801	TGCAAAGGCG ACGTTTCCGC	GCACAACCCC CGTGTGGGG	AGTGCCACGT TCACGGTGCA	TGTGAGTTGG ACACTCAACC	ATAGTTGTGG TATCAACACC
4851	AAAGAGTCAA TTTCTCAGTT	ATGGCTCTCC TACCGAGAGG	TCAAGCGTAT AGTTCGCATA	TCAACAAGGG AGTTGTTCCC	GCTGAAGGAT CGACTTCCTA
4901	GCCCAGAAGG CGGGTCTTCC	TACCCCATTTG ATGGGGTAAC	TATGGGATCT ATACCCTAGA	GATCTGGGGC CTAGACCCCG	CTCGGTGCAC GAGCCACGTG
4951	ATGCTTTTACA TACGAAATGT	TGTGTTTAGT ACACAAATCA	CGAGGTAAAA GCTCCAATTT	AAACGTCTAG TTTGCAGATC	GCCCCCGAA CGGGGGGCTT
5001	CCACGGGGAC GGTGCCCTG	GTGGTTTTTCC CACCAAAAGG	TTTGAAAAAC AAACTTTTTG	ACGATGATAA TGCTACTATT	TACCATGATT ATGGTACTAA
5051	GAACAAGATG CTTGTTCTAC	GATTGCACGC CTAACGTGCG	AGGTTCTCCG TCCAAGAGGC	GCCGCTTGGG CGGCGAACCC	TGGAGAGGCT ACCTCTCCGA
5101	ATTCGGCTAT TAAGCCGATA	GACTGGGCAC CTGACCCGTG	AACAGACAAT TTGTCTGTTA	CGGCTGCTCT GCCGACGAGA	GATGCCGCCG CTACGGCGGC
5151	TGTTCCGGCT ACAAGGCCGA	GTCAGCGCAG CAGTCGCGTC	GGGCGCCCGG CCCGCGGGCC	TTCTTTTTGT AAGAAAAACA	CAAGACCGAC GTTCTGGCTG
5201	CTGTCCGGTG GACAGGCCAC	CCCTGAATGA GGGACTTACT	ACTGCAGGAC TGACGTCTCT	GAGGCAGCGC CTCCGTCGCG	GGCTATCGTG CCGATAGCAC
5251	GCTGGCCACG CGACCGGTG	ACGGGCGTTC TGCCCGCAAG	CTTGCGCAGC GAACGCGTCG	TGTGCTCGAC ACACGAGCTG	GTTGTCACTG CAACAGTGAC
5301	AAGCGGGAAG TTCGCCCTTC	GGAATGGCTG CCTGACCGAC	CTATTGGGCG GATAACCCGC	AAGTGCCGGG TTCACGGCCC	GCAGGATCTC CGTCCTAGAG
5351	CTGTCATCTC GACAGTAGAG	ACCTTGCTCC TGGAACGAGG	TGCCGAGAAA ACGGCTCTTT	GTATCCATCA CATAGGTAGT	TGGCTGATGC ACCGACTACG
5401	AATGCGGCGG TTACGCCGCC	CTGCATACGC GACGTATGCG	TTGATCCGGC AACTAGGCCG	TACCTGCCCA ATGGACGGGT	TTCGACCACC AAGCTGGTGG
5451	AAGCGAAACA TTCGCTTTGT	TCGCATCGAG AGCGTAGCTC	CGAGCACGTA GCTCGTGCAT	CTCGGATGGA GAGCCTACCT	AGCCGGTCTT TCGGCCAGAA
5501	GTCGATCAGG CAGCTAGTCC	ATGATCTGGA TACTAGACCT	CGAAGAGCAT GCTTCTCGTA	CAGGGGCTCG GTCCCCGAGC	CGCCAGCCGA GCGGTGCGCT
5551	ACTGTTTCGC TGACAAGCGG	AGGCTCAAGG TCCGAGTTCC	CGCGCATGCC GCGCGTACGG	CGACGGCGAG GCTGCCGCTC	GATCTCGTCG CTAGAGCAGC
5601	TGACCCATGG ACTGGGTACC	CGATGCCTGC GCTACGGACG	TTGCCGAATA AACGGCTTAT	TCATGGTGGA AGTACCACCT	AAATGGCCGC TTTACCGGCG
5651	TTTTCTGGAT AAAAGACCTA	TCATCGACTG AGTAGCTGAC	TGGCCGGCTG ACCGGCCGAC	GGTGTGGCGG CCACACCGCC	ACCGCTATCA TGGCGATAGT

5701	GGACATAGCG CCTGTATCGC	TTGGCTACCC AACCGATGGG	GTGATATTGC CACTATAACG	TGAAGAGCTT ACTTCTCGAA	GGCGGCGAAT CCGCCGCTTA
5751	GGGCTGACCG CCCGACTGGC	CTTCCTCGTG GAAGGAGCAC	CTTTACGGTA GAAATGCCAT	TCGCCGCTCC AGCGGCGAGG	CGATTTCGAG GCTAAGCGTC
5801	CGCATCGCCT GCGTAGCGGA	TCTATCGCCT AGATAGCGGA	TCTTGACGAG AGAACTGCTC	TTCTTCTGAG AAGAAGACTC	CGGGACTCTG GCCCTGAGAC
5851	GGGTTCGCAT CCCAAGCGTA	CGATAAAATA GCTATTTTAT	AAAGATTTTA TTTCTAAAAT	TTTAGTCTCC AAATCAGAGG	AGAAAAAGGG TCTTTTCC
5901	GGGAATGAAA CCCTTACTTT	GACCCACCT CTGGGGTGGA	GTAGGTTTGG CATCCAAACC	CAAGCTAGCT GTTCGATCGA	TAAGTAACGC ATTCATTGCG
5951	CATTTTGCAA GTAAACGTT	GGCATGGAAA CCGTACCTTT	AATACATAAC TTATGTATTG	TGAGAATAGA ACTCTTATCT	GAAGTTCAGA CTTCAAGTCT
6001	TCAAGGTCAG AGTTCCAGTC	GAACAGATGG CTTGTCTACC	AACAGCTGAA TTGTCGACTT	TATGGGCCAA ATACCCGGTT	ACAGGATATC TGTCCTATAG
6051	TGTGGTAAGC ACACCATTCG	AGTTCCTGCC TCAAGGACGG	CCGGCTCAGG GGCCGAGTCC	GCCAAGAACA CGGTTCTTGT	GATGGAACAG CTACCTTGTC
6101	CTGAATATGG GACTTATACC	GCCAAACAGG CGGTTTGTC	ATATCTGTGG TATAGACACC	TAAGCAGTTC ATTCGTCAAG	CTGCCCCGGC GACGGGGCCG
6151	TCAGGGCCAA AGTCCCGGTT	GAACAGATGG CTTGTCTACC	TCCCCAGATG AGGGGTCTAC	CGGTCCAGCC GCCAGGTCGG	CTCAGCAGTT GAGTCGTCAG
6201	TCTAGAGAAC AGATCTCTTG	CATCAGATGT GTAGTCTACA	TTCCAGGGTG AAGGTCCCAC	CCCCAAGGAC GGGGTTCTTG	CTGAAATGAC GACTTTACTG
6251	CCTGTGCCTT GGACACGGAA	ATTTGAACTA TAAACTTGAT	ACCAATCAGT TGGTTAGTCA	TCGCTTCTCG AGCGAAGAGC	CTTCTGTTCG GAAGACAAGC
6301	CGCGCTTCTG GCGCGAAGAC	CTCCCCGAGC GAGGGGCTCG	TCAATAAAAG AGTTATTTTC	AGCCCACAAC TCGGGTGTTG	CCCTCACTCG GGGAGTGAGC
6351	GGGCGCCAGT CCCGCGGTCA	CCTCCGATTG GGAGGCTAAC	ACTGAGTCGC TGACTCAGCG	CCGGGTACCC GGCCCATGGG	GTGTATCCAA CACATAGGTT
6401	TAAACCCTCT ATTTGGGAGA	TGCAGTTGCA ACGTCAACGT	TCCGACTTGT AGGCTGAACA	GGTCTCGCTG CCAGAGCGAC	TTCCTTGGGA AAGGAACCTT
6451	GGGTCTCCTC CCCAGAGGAG	TGAGTGATTG ACTCACTAAC	ACTACCCGTC TGATGGGCAG	AGCGGGGGTC TCGCCCCCAG	TTTCATTTCAT AAAGTAAGTA
6501	GCAGCATGTA CGTCGTACAT	TCAAAATTAA AGTTTAAATT	TTTGGTTTTT AAACCAAAAA	TTTCTTAAGT AAAGAATTCA	ATTTACATTA TAAATGTAAT
6551	AATGGCCATA TTACCGGTAT	GTTGCATTAA CAACGTAATT	TGAATCGGCC ACTTAGCCGG	AACGCGCGGG TTGCGCGCCC	GAGAGGCGGT CTCTCCGCCA
6601	TTGCGTATTG AACGCATAAC	GCGCTCTTCC CGCGAGAAGG	GCTTCCTCGC CGAAGGAGCG	TCACTGACTC AGTGACTGAG	GCTGCGCTCG CGACGCGAGC

6651	GTCGTTCGGC	TGCGGCGAGC	GGTATCAGCT	CACTCAAAGG	CGGTAATACG
	CAGCAAGCCG	ACGCCGCTCG	CCATAGTCGA	GTGAGTTTCC	GCCATTATGC
6701	GTTATCCACA	GAATCAGGGG	ATAACGCAGG	AAAGAACATG	TGAGCAAAAG
	CAATAGGTGT	CTTAGTCCCC	TATTGCGTCC	TTTCTTGATC	ACTCGTTTTT
6751	GCCAGCAAAA	GGCCAGGAAC	CGTAAAAAGG	CCGCGTTGCT	GGCGTTTTTC
	CGGTCGTTTT	CCGGTCCTTG	GCATTTTTTC	GGCGCAACGA	CCGCAAAAAG
6801	CATAGGCTCC	GCCCCCTGA	CGAGCATCAC	AAAAATCGAC	GCTCAAGTCA
	GTATCCGAGG	CGGGGGGACT	GCTCGTAGTG	TTTTTAGCTG	CGAGTTCAGT
6851	GAGGTGGCGA	AACCCGACAG	GACTATAAAG	ATACCAGGCG	TTCCCCCTG
	CTCCACCGCT	TTGGGCTGTC	CTGATATTTT	TATGGTCCGC	AAAGGGGGAC
6901	GAAGCTCCCT	CGTGCGCTCT	CCTGTTCCGA	CCCTGCCGCT	TACCGGATAC
	CTTCGAGGGA	GCACGCGAGA	GGACAAGGCT	GGGACGGCGA	ATGGCCTATG
6951	CTGTCCGCCT	TTCTCCCTTC	GGGAAGCGTG	GCGCTTTCTC	ATAGCTCACG
	GACAGGCGGA	AAGAGGGAAG	CCCTTCGCAC	CGCGAAAGAG	TATCGAGTGC
7001	CTGTAGGTAT	CTCAGTTCGG	TGTAGGTCGT	TCGCTCCAAG	CTGGGCTGTG
	GACATCCATA	GAGTCAAGCC	ACATCCAGCA	AGCGAGGTTC	GACCCGACAC
7051	TGCACGAACC	CCCCGTTTCA	CCCGACCGCT	GCGCCTTATC	CGGTAACTAT
	ACGTGCTTGG	GGGGCAAGTC	GGGCTGGCGA	CGCGGAATAG	GCCATTGATA
7101	CGTCTTGAGT	CCAACCCGGT	AAGACACGAC	TTATCGCCAC	TGGCAGCAGC
	GCAGAACTCA	GGTTGGGCCA	TTCTGTGCTG	AATAGCGGTG	ACCGTCGTCG
7151	CACTGGTAAC	AGGATTAGCA	GAGCGAGGTA	TGTAGGCGGT	GCTACAGAGT
	GTGACCATTG	TCCTAATCGT	CTCGCTCCAT	ACATCCGCCA	CGATGTCTCA
7201	TCTTGAAGTG	GTGGCCTAAC	TACGGCTACA	CTAGAAGAAC	AGTATTTGGT
	AGAACTTCAC	CACCGGATTG	ATGCCGATGT	GATCTTCTTG	TCATAAACCA
7251	ATCTGCGCTC	TGCTGAAGCC	AGTTACCTTC	GGAAAAAGAG	TTGGTAGCTC
	TAGACGCGAG	ACGACTTCGG	TCAATGGAAG	CCTTTTTCTC	AACCATCGAG
7301	TTGATCCGGC	AAACAAACCA	CCGCTGGTAG	CGGTGGTTTT	TTTGTGTTGCA
	AACTAGGCCG	TTTGTGTTGG	GGCGACCATC	GCCACCAAAA	AAACAAACGT
7351	AGCAGCAGAT	TACGCGCAGA	AAAAAAGGAT	CTCAAGAAGA	TCCTTTGATC
	TCGTGCTCTA	ATGCGCGTCT	TTTTTTCCTA	GAGTCTTCTT	AGGAAACTAG
7401	TTTTCTACGG	GGTCTGACGC	TCAGTGGAAC	GAAAACTCAC	GTTAAGGGAT
	AAAAGATGCC	CCAGACTGCG	AGTCACCTTG	CTTTTGAGTG	CAATTCCTTA
7451	TTTGGTCATG	AGATTATCAA	AAAGGATCTT	CACCTAGATC	CTTTTGCGGC
	AAACCAGTAC	TCTAATAGTT	TTTCCTAGAA	GTGGATCTAG	GAAAACGCCG
7501	CGCAAATCAA	TCTAAAGTAT	ATATGAGTAA	ACTTGGTCTG	ACAGTTACCA
	GCGTTTAGTT	AGATTTTATA	TATACTCATT	TGAACCAGAC	TGTCAATGGT
7551	ATGCTTAATC	AGTGAGGCAC	CTATCTCAGC	GATCTGTCTA	TTTCGTTTAT
	TACGAATTAG	TCACTCCGTG	GATAGAGTCG	CTAGACAGAT	AAAGCAAGTA

7601	CCATAGTTGC	CTGACTCCCC	GTCGTGTAGA	TAACACGAT	ACGGGAGGGC
	GGTATCAACG	GA CTGAGGGG	CAGCACATCT	ATTGATGCTA	TGCCCTCCCG

7651	TTACCATCTG	GGCCCACTGC	TGCAATGATA	CCGCGAGACC	CACGCTCACC
	AATGGTAGAC	CGGGGTCACG	ACGTTACTAT	GGCGCTCTGG	GTGCGAGTGG

7701	GGCTCCAGAT	TTATCAGCAA	TAAACCAGCC	AGCCGGAAGG	GCCGAGCGCA
	CCGAGGTCTA	AATAGTCGTT	ATTTGGTCGG	TCGGCCTTCC	CGGCTCGCGT

7751	GAAGTGGTCC	TGCAACTTTA	TCCGCCTCCA	TCCAGTCTAT	TAATTGTTGC
	CTTCACCAGG	ACGTTGAAAT	AGGCGGAGGT	AGGTCAGATA	ATTAACAACG

7801	CGGGAAGCTA	GAGTAAGTAG	TTCGCCAGTT	AATAGTTTGC	GCAACGTTGT
	GCCCTTCGAT	CTCATTCATC	AAGCGGTCAA	TTATCAAACG	CGTTGCAACA

7851	TGCCATTGCT	ACAGGCATCG	TGGTGTACAG	CTCGTCGTTT	GGTATGGCTT
	ACGGTAACGA	TGTCCGTAGC	ACCACAGTGC	GAGCAGCAAA	CCATACCGAA

7901	CATTCAGCTC	CGGTTCCCAA	CGATCAAGGC	GAGTTACATG	ATCCCCCATG
	GTAAGTCGAG	GCCAAGGGTT	GCTAGTTCCG	CTCAATGTAC	TAGGGGGTAC

7951	TTGTGCAAAA	AAGCGGTTAG	CTCCTTCGGT	CCTCCGATCG	TTGTCAGAAG
	AACACGTTTT	TTCGCCAATC	GAGGAAGCCA	GGAGGCTAGC	AACAGTCTTC

8001	TAAGTTGGCC	GCAGTGTTAT	CACTCATGGT	TATGGCAGCA	CTGCATAATT
	ATTCAACCGG	CGTCACAATA	GTGAGTACCA	ATACCGTCGT	GACGTATTAA

8051	CTCTTACTGT	CATGCCATCC	GTAAGATGCT	TTTCTGTGAC	TGGTGAGTAC
	GAGAATGACA	GTACGGTAGG	CATTCTACGA	AAAGACACTG	ACCACTCATG

8101	TCAACCAAGT	CATTCTGAGA	ATAGTGATG	CGGCGACCGA	GTTGCTCTTG
	AGTTGGTTCA	GTAAGACTCT	TATCACATAC	GCCGCTGGCT	CAACGAGAAC

8151	CCCCGGCGTCA	ATACGGGATA	ATACCGCGCC	ACATAGCAGA	ACTTTAAAAG
	GGGCCGCGAGT	TATGCCCTAT	TATGGCGCGG	TGTATCGTCT	TGAAATTTTC

8201	TGCTCATCAT	TGGAAAACGT	TCTTCGGGGC	GAAAACTCTC	AAGGATCTTA
	ACGAGTAGTA	ACCTTTTGCA	AGAAGCCCCG	CTTTTGAGAG	TTCCTAGAAT

8251	CCGCTGTTGA	GATCCAGTTC	GATGTAACCC	ACTCGTGCAC	CCAAC TGATC
	GGCGACAAC T	CTAGGTCAAG	CTACATTGGG	TGAGCACGTG	GGTTGACTAG

8301	TTCAGCATCT	TTTACTTTCA	CCAGCGTTTC	TGGGTGAGCA	AAAACAGGAA
	AAGTCGTAGA	AAATGAAAGT	GGTCGCAAAG	ACCACTCGT	TTTTGTCCTT

8351	GGCAAAATGC	CGCAAAAAAG	GGAATAAGGG	CGACACGGAA	ATGTTGAATA
	CCGTTTTTACG	GCGTTTTTTC	CCTTATTCCC	GCTGTGCCTT	TACAACTTAT

8401	CTCATACTCT	TCCTTTTTCA	ATATTATTGA	AGCATTTATC	AGGGTTATTG
	GAGTATGAGA	AGGAAAAAGT	TATAATAACT	TCGTAAATAG	TCCCAATAAC

8451	TCTCATGAGC	GGATACATAT	TTGAATGTAT	TTAGAAAAAT	AAACAAATAG
	AGAGTACTCG	CCTATGTATA	AACTTACATA	AATCTTTTTA	TTTGTTTTATC

8501	GGGTTCCGCG	CACATTTT			
	CCCAAGGCGC	GTGTAAAG			

09759152.01601
T09T0"25T6560

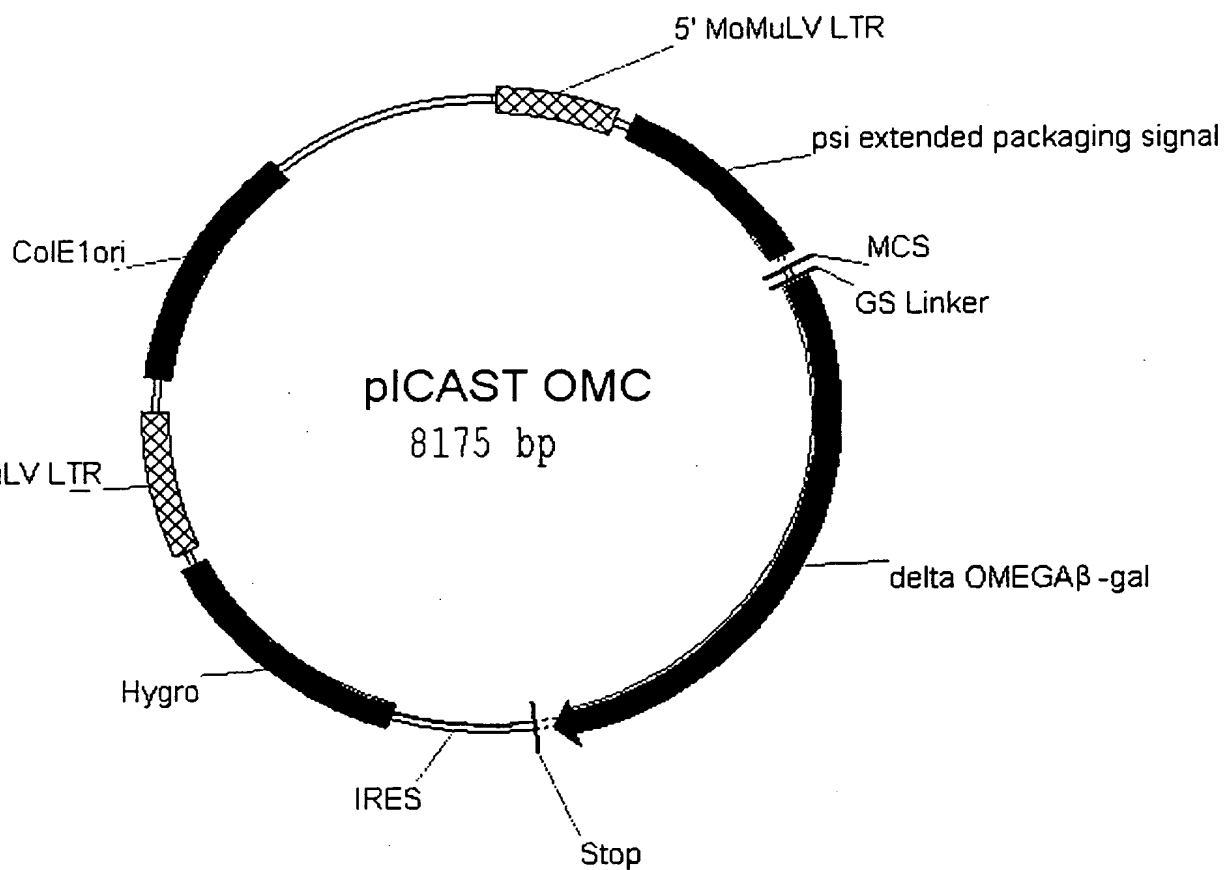


Figure 12A

1	CTGCAGCCTG	AATATGGGCC	AAACAGGATA	TCTGTGGTAA	GCAGTTCCTG
	GACGTCGGAC	TTATACCCGG	TTGTCTCTAT	AGACACCATT	CGTCAAGGAC

51	CCCCGGCTCA	GGGCCAAGAA	CAGATGGAAC	AGCTGAATAT	GGGCCAAACA
	GGGGCCGAGT	CCCGGTTCTT	GTCTACCTTG	TCGACTTATA	CCCGGTTTGT

101	GGATATCTGT	GGTAAGCAGT	TCCTGCCCCG	GCTCAGGGCC	AAGAACAGAT
	CCTATAGACA	CCATTCTGCA	AGGACGGGGC	CGAGTCCCGG	TTCTTGTCTA

151	GGTCCCCAGA	TGCGGTCCAG	CCCTCAGCAG	TTTCTAGAGA	ACCATCAGAT
	CCAGGGGTCT	ACGCCAGGTC	GGGAGTCGTC	AAAGATCTCT	TGGTAGTCTA

201	GTTTCCAGGG	TGCCCCAAGG	ACCTGAAATG	ACCCTGTGCC	TTATTTGAAC
	CAAAGGTCCC	ACGGGGTTCC	TGGACTTTAC	TGGGACACGG	AATAAACTTG

251	TAACCAATCA	GTTTCGTTCT	CGCTTCTGTT	CGCGCGCTTC	TGCTCCCCGA
	ATTGGTTAGT	CAAGCGAAGA	GCGAAGACAA	GCGCGCGAAG	ACGAGGGGCT

301	GCTCAATAAA	AGAGCCCACA	ACCCCTCACT	CGGGGCGCCA	GTCCTCCGAT
	CGAGTTATTT	TCTCGGGTGT	TGGGGAGTGA	GCCCCGCGGT	CAGGAGGCTA

351	TGACTGAGTC	GCCCCGGTAC	CCGTGTATCC	AATAAACCCCT	CTTGCAAGTTG
	ACTGACTCAG	CGGGCCCATG	GGCACATAGG	TTATTTGGGA	GAACGTCAAC

401	CATCCGACTT	GTGGTCTCGC	TGTTCCCTTG	GAGGGTCTCC	TCTGAGTGAT
	GTAGGCTGAA	CACCAGAGCG	ACAAGGAACC	CTCCCAGAGG	AGACTCACTA

451	TGACTACCCG	TCAGCGGGGG	TCTTTCATTT	GGGGGCTCGT	CCGGGATCGG
	ACTGATGGGC	AGTCGCCCCC	AGAAAGTAAA	CCCCCGAGCA	GGCCCTAGCC

501	GAGACCCCTG	CCCAGGGACC	ACCGACCCAC	CACCGGGAGG	CAAGCTGGCC
	CTCTGGGGAC	GGGTCCCTGG	TGGCTGGGTG	GTGGCCCTCC	GTTGACCCGG

551	AGCAACTTAT	CTGTGTCTGT	CCGATTGTCT	AGTGTCTATG	ACTGATTTTA
	TCGTTGAATA	GACACAGACA	GGCTAACAGA	TCACAGATAC	TGACTAAAAAT

601	TGCGCCTGCG	TCGGTACTAG	TTAGCTAACT	AGCTCTGTAT	CTGGCGGACC
	ACGCGGACGC	AGCCATGATC	AATCGATTGA	TCGAGACATA	GACCGCCTGG

651	CGTGGTGGA	CTGACGAGTT	CTGAACACCC	GGCCGCAACC	CTGGGAGACG
	GCACCACCTT	GACTGCTCAA	GACTTGTGGG	CCGGCGTTGG	GACCCTCTGC

701	TCCAGGGGAC	TTTGGGGGCC	GTTTTTGTGG	CCCAGCTGA	GGAAGGGAGT
	AGGGTCCCTG	AAACCCCGG	CAAAAACACC	GGGCTGGACT	CCTTCCCTCA

751	CGATGTGGAA	TCCGACCCCG	TCAGGATATG	TGGTTCTGGT	AGGAGACGAG
	GCTACACCTT	AGGCTGGGGC	AGTCCTATAC	ACCAAGACCA	TCCTCTGCTC

801	AACCTAAAAC	AGTTCCCGCC	TCCGTCTGAA	TTTTTGCTTT	CGGTTTGGA
	TTGGATTTTG	TCAAGGGCGG	AGGCAGACTT	AAAAACGAAA	GCCAAACCTT

851	CCGAAGCCGC	GCGTCTTGTC	TGCTGCAGCA	TCGTTCTGTG	TTGTCTCTGT
	GGCTTCGGCG	CGCAGAACAG	ACGACGTCGT	AGCAAGACAC	AACAGAGACA

901	CTGACTGTGT	TTCTGTATTT	GTCTGAAAAT	TAGGGCCAGA	CTGTTACCAC
	GACTGACACA	AAGACATAAA	CAGACTTTTA	ATCCCGGTCT	GACAATGGTG

FIGURE 12B

951	TCCCTTAAGT	TTGACCTTAG	GTAAGTGGAA	AGATGTCGAG	CGGCTCGCTC
	AGGGAATTCA	AACTGGAATC	CATTGACCTT	TCTACAGCTC	GCCGAGCGAG
1001	ACAACCAAGT	GGTAGATGTC	AAGAAGAGAC	GTTGGGTTAC	CTTCTGCTCT
	TGTTGGTCAG	CCATCTACAG	TTCTTCTCTG	CAACCCAATG	GAAGACGAGA
1051	GCAGAATGGC	CAACCTTTAA	CGTCGGATGG	CCGCGAGACG	GCACCTTTAA
	CGTCTTACCG	GTTGGAAATT	GCAGCCTACC	GGCGCTCTGC	CGTGGAAATT
1101	CCGAGACCTC	ATCACCCAGG	TTAAGATCAA	GGTCTTTTCA	CCTGGCCCGC
	GGCTCTGGAG	TAGTGGGTCC	AATTCTAGTT	CCAGAAAAGT	GGACCGGGCG
1151	ATGGACACCC	AGACCAGGTC	CCCTACATCG	TGACCTGGGA	AGCCTTGGCT
	TACCTGTGGG	TCTGGTCCAG	GGGATGTAGC	ACTGGACCCT	TCGGAACCGA
1201	TTTGACCCCC	CTCCCTGGGT	CAAGCCCTTT	GTACACCCTA	AGCCTCCGCC
	AAACTGGGGG	GAGGGACCCA	GTTCCGGAAA	CATGTGGGAT	TCGGAGGCGG
1251	TCCTCTTCCT	CCATCCGCCC	CGTCTCTCCC	CCTTGAACCT	CCTCGTTCGA
	AGGAGAAGGA	GGTAGGCGGG	GCAGAGAGGG	GGAACCTGGA	GGAGCAAGCT
1301	CCCCGCCTCG	ATCCTCCCTT	TATCCAGCCC	TCACTCCTTC	TCTAGGCGCC
	GGGGCGGAGC	TAGGAGGGAA	ATAGGTCGGG	AGTGAGGAAG	AGATCCGCGG
1351	GGCCGCTCTA	GCCCATTAAT	ACGACTCACT	ATAGGGCGAT	TCGAATCAGG
	CCGGCGAGAT	CGGGTAATTA	TGCTGAGTGA	TATCCCGCTA	AGCTTAGTCC
1401	CCTTGGCGCG	CCGGATCCTT	AATTAAGCGC	AATTGGGAGG	TGGCGGTAGC
	GGAACCGCGC	GGCCTAGGAA	TTAATTTCGC	TTAACCTCC	ACCGCCATCG
1451	CTCGAGATGG	GCGTGATTAC	GGATTCACTG	GCCGTCGTTT	TACAACGTCG
	GAGCTCTACC	CGCACTAATG	CCTAAGTGAC	CGGCAGCAA	ATGTTGCAGC
1501	TGACTGGGAA	AACCCTGGCG	TTACCCAACT	TAATCGCCTT	GCAGCACATC
	ACTGACCCTT	TTGGGACCGC	AATGGGTGA	ATTAGCGGAA	CGTCGTGTAG
1551	CCCCTTTTCG	CAGCTGGCGT	AATAGCGAAG	AGGCCCGCAC	CGATCGCCCT
	GGGGAAAGCG	GTCGACCGCA	TTATCGCTTC	TCCGGGCGTG	GCTAGCGGGA
1601	TCCCAACAGT	TACGCAGCCT	GAATGGCGAA	TGGCGCTTTG	CCTGGTTTCC
	AGGGTTGTCA	ATGCGTCGGA	CTTACCGCTT	ACCGCGAAAC	GGACCAAAGG
1651	GGCACCAGAA	GCGGTGCCGG	AAAGCTGGCT	GGAGTGCAT	CTTCCTGAGG
	CCGTGGTCTT	CGCCACGGCC	TTTCGACCGA	CCTCACGCTA	GAAGGACTCC
1701	CCGATACTGT	CGTCGTCCCC	TCAAACCTGGC	AGATGCACGG	TTACGATGCG
	GGCTATGACA	GCAGCAGGGG	AGTTTGACCG	TCTACGTGCC	AATGCTACGC
1751	CCCATCTACA	CCAACGTGAC	CTATCCCATT	ACGGTCAATC	CGCCGTTTGT
	GGGTAGATGT	GGTTGCACTG	GATAGGGTAA	TGCCAGTTAG	GCGGCAAACA
1801	TCCACGGAG	AATCCGACGG	GTTGTTACTC	GCTCACATTT	AATGTTGATG
	AGGGTGCCCTC	TTAGGCTGCC	CAACAATGAG	CGAGTGTA	TTACAACCTAC
1851	AAAGCTGGCT	ACAGGAAGGC	CAGACGCGAA	TTATTTTTGA	TGGCGTTAAC
	TTTCGACCGA	TGTCCTTCCG	GTCTGCGCTT	AATAAAACT	ACCGCAATTG

1901	TCGGCGTTTC	ATCTGTGGTG	CAACGGGCGC	TGGGTCGGTT	ACGGCCAGGA
	AGCCGCAAAG	TAGACACCAC	GTTGCCCCGG	ACCCAGCCAA	TGCCGGTCCT
1951	CAGTCGTTTG	CCGTCTGAAT	TTGACCTGAG	CGCATTTTTA	CGCGCCGGAG
	GTCAGCAAAC	GGCAGACTTA	AACTGGACTC	GCGTAAAAAT	GCGCGGCCTC
2001	AAAACCGCCT	CGCGGTGATG	GTGCTGCGCT	GGAGTGACGG	CAGTTATCTG
	TTTTGGCGGA	GCGCCACTAC	CACGACGCGA	CCTCACTGCC	GTCAATAGAC
2051	GAAGATCAGG	ATATGTGGCG	GATGAGCGGC	ATTTTCCGTG	ACGTCTCGTT
	CTTCTAGTCC	TATACACCGC	CTACTCGCCG	TAAAAGGCAC	TGCAGAGCAA
2101	GCTGCATAAA	CCGACTACAC	AAATCAGCGA	TTTCCATGTT	GCCACTCGCT
	CGACGTATTT	GGCTGATGTG	TTTAGTCGCT	AAAGGTACAA	CGGTGAGCGA
2151	TTAATGATGA	TTTCAGCCGC	GCTGTACTGG	AGGCTGAAGT	TCAGATGTGC
	AATTACTACT	AAAGTCGGCG	CGACATGACC	TCCGACTTCA	AGTCTACACG
2201	GGCGAGTTGC	GTGACTACCT	ACGGGTAACA	GTTTCTTTAT	GGCAGGGTGA
	CCGCTCAACG	CACTGATGGA	TGCCCCATTGT	CAAAGAAATA	CCGTCCCCT
2251	AACGCAGGTC	GCCAGCGGCA	CCGCGCCTTT	CGGCGGTGAA	ATTATCGATG
	TTGCGTCCAG	CGGTGCGCGT	GGCGCGGAAA	GCCGCCACTT	TAATAGCTAC
2301	AGCGTGGTGG	TTATGCCGAT	CGCGTCACAC	TACGTCTGAA	CGTCGAAAAC
	TCGCACCACC	AATACGGCTA	GCGCAGTGTG	ATGCAGACTT	GCAGCTTTTG
2351	CCGAAACTGT	GGAGCGCCGA	AATCCCGAAT	CTCTATCGTG	CGGTGGTTGA
	GGCTTTTGACA	CCTCGCGGCT	TTAGGGCTTA	GAGATAGCAC	GCCACCAACT
2401	ACTGCACACC	GCCGACGGCA	CGCTGATTGA	AGCAGAAGCC	TGCGATGTGC
	TGACGTGTGG	CGGCTGCCGT	GCGACTAACT	TCGTCTTCGG	ACGCTACAGC
2451	GTTTCCGCGA	GGTGCGGATT	GAAAATGGTC	TGCTGCTGCT	GAACGGCAAG
	CAAAGGCGCT	CCACGCCTAA	CTTTTACCAG	ACGACGACGA	CTTGCCGTTT
2501	CCGTTGCTGA	TTGAGGGCGT	TAACCGTCAC	GAGCATCATC	CTCTGCATGG
	GGCAACGACT	AAGCTCCGCA	ATTGGCAGTG	CTCGTAGTAG	GAGACGTACC
2551	TCAGGTCATG	GATGAGCAGA	CGATGGTGCA	GGATATCCTG	CTGATGAAGC
	AGTCCAGTAC	CTACTCGTCT	GCTACCACGT	CCTATAGGAC	GACTACTTCG
2601	AGAACAACCT	TAACGCCGTG	CGCTGTTTCG	ATTATCCGAA	CCATCCGCTG
	TCTTGTTGAA	ATTGCGGCAC	GCGACAAGCG	TAATAGGCTT	GGTAGGCGAC
2651	TGGTACACGC	TGTGCGACCG	CTACGGCCTG	TATGTGGTGG	ATGAAGCCAA
	ACCATGTGCG	ACACGCTGGC	GATGCCGGAC	ATACACCACC	TACTTCGGTT
2701	TATTGAAACC	CACGGCATGG	TGCCAATGAA	TCGTCTGACC	GATGATCCGC
	ATAACTTTGG	GTGCCGTACC	ACGGTTACTT	AGCAGACTGG	CTACTAGGCG
2751	GCTGGCTACC	GGCGATGAGC	GAACGCGTAA	CGCGAATGGT	GCAGCGCGAT
	CGACCGATGG	CCGCTACTCG	CTTGCGCATT	GCGCTTACCA	CGTCGCGCTA
2801	CGTAATCACC	CGAGTGTGAT	CATCTGGTCG	CTGGGGAATG	AATCAGGCCA
	GCATTAGTGG	GCTCACACTA	GTAGACCAGC	GACCCCTTAC	TTAGTCCGGT

2851	CGGCGCTAAT GCCGCGATTA	CACGACGCGC GTGCTGCGCG	TGTATCGCTG ACATAGCGAC	GATCAAATCT CTAGTTTAGA	GTCGATCCTT CAGCTAGGAA
2901	CCC GCCCGGT GGGCGGGCCA	GCAGTATGAA CGTCATACTT	GGCGGCGGAG CCGCCGCTC	CCGACACCAC GGCTGTGGTG	GGCCACCGAT CCGGTGGCTA
2951	ATTATTTGCC TAATAAACGG	CGATGTACGC GCTACATGCG	GCGCGTGGAT CGCGCACCTA	GAAGACCAGC CTTCTGGTCG	CCTTCCCGGC GGAAGGGCCG
3001	TGTGCCGAAA ACACGGCTTT	TGGTCCATCA ACCAGGTAGT	AAAAATGGCT TTTTTACCGA	TTCGCTACCT AAGCGATGGA	GGAGAGACGC CCTCTCTGCG
3051	GCCCGCTGAT CGGCGGACTA	CCTTTGCGAA GGAACGCTT	TACGCCACG ATGCGGGTGC	CGATGGGTAA GCTACCCATT	CAGTCTTGGC GTCAGAACCG
3101	GGTTTCGCTA CCAAAGCGAT	AATACTGGCA TTATGACCGT	GGCGTTTCGT CCGCAAAGCA	CAGTATCCCC GTCATAGGGG	GTTTACAGGG CAAATGTCCC
3151	CGGCTTCGTC GCCGAAGCAG	TGGGACTGGG ACCCTGACCC	TGGATCAGTC ACCTAGTCAG	GCTGATTAAA CGACTAATTT	TATGATGAAA ATACTACTTT
3201	ACGGCAACCC TGCCGTTGGG	GTGGTCGGCT CACCAGCCGA	TACGGCGGTG ATGCCGCCAC	ATTTTGCGCA TAAACCGCT	TACGCCGAAC ATGCGGCTTG
3251	GATCGCCAGT CTAGCGGTCA	TCTGTATGAA AGACATACTT	CGGTCTGGTC GCCAGACCAG	TTTGCCGACC AAACGGCTGG	GCACGCCGCA CGTGCGGCGT
3301	TCCAGCGCTG AGGTCGCGAC	ACGGAAGCAA TGCCCTTCGTT	AACACCAGCA TTGTGGTCGT	GCAGTTTTTC CGTCAAAAAG	CAGTTCGGTT GTCAAGGCAA
3351	TATCCGGGCA ATAGGCCCGT	AACCATCGAA TTGGTAGCTT	GTGACCAGCG CACTGGTCGC	AATACCTGTT TTATGGACAA	CCGTCATAGC GGCAGTATCG
3401	GATAACGAGC CTATTGCTCG	TCCTGCACTG AGGACGTGAC	GATGGTGGCG CTACCACCGC	CTGGATGGTA GACCTACCAT	AGCCGCTGGC TCGGCGACCG
3451	AAGCGGTGAA TTCGCCACTT	GTGCCTCTGG CACGGAGACC	ATGTCGCTCC TACAGCGAGG	ACAAGGTAAA TGTTCCATT	CAGTTGATTG GTCAACTAAC
3501	AACTGCCTGA TTGACGGACT	ACTACCGCAG TGATGGCGTC	CCGGAGAGCG GGCCTCTCGC	CCGGGCAACT GGCCCGTTGA	CTGGCTCACA GACCGAGTGT
3551	GTACGCGTAG CATGCGCATC	TGCAACCGAA ACGTTGGCTT	CGCGACCGCA GCGCTGGCGT	TGGTCAGAAG ACCACTCTTC	CCGGGCACAT GGCCCGTGTA
3601	CAGCGCCTGG GTCGCGGACC	CAGCAGTGGC GTCGTCACCG	GTCTGGCGGA CAGACCGCCT	AAACCTCAGT TTTGAGTCA	GTGACGCTCC CACTGCGAGG
3651	CCGCCGCGTC GGCGGCGCAG	CCACGCCATC GGTGCGGTAG	CCGCATCTGA GGCGTAGACT	CCACCAGCGA GGTGGTCGCT	AATGGATTTT TTACCTAAAA
3701	TGCATCGAGC ACGTAGCTCG	TGGGTAATAA ACCCATTATT	GCGTTGGCAA CGCAACCGTT	TTTAACCGCC AAATTGGCGG	AGTCAGGCTT TCAGTCCGAA
3751	TCTTTCACAG AGAAAGTGTC	ATGTGGATTG TACACCTAAC	GCGATAAAAA CGCTATTTTT	ACAACTGCTG TGTTGACGAC	ACGCCGCTGC TGCGGCGACG

3801	CGCATCAGTT	CACCCGTGTC	GATAGATCTG	AACAGAAACT	CATTTCCGAA
	CGCTAGTCAA	GTGGGCACAG	CTATCTAGAC	TTGTCTTTGA	GTAAAGGCTT

3851	GAAGACCTAG	TCGACCATCA	TCATCATCAT	CACCGGTAAT	AATAGGTAGA
	CTTCTGGATC	AGCTGGTAGT	AGTAGTAGTA	GTGGCCATTA	TTATCCATCT

3901	TAAGTGACTG	ATTAGATGCA	TTTCGACTAG	ATCCCTCGAC	CAATTCCGGT
	ATTCACTGAC	TAATCTACGT	AAAGCTGATC	TAGGGAGCTG	GTTAAGGCCA

3951	TATTTTCCAC	CATATTGCCG	TCTTTTGGCA	ATGTGAGGGC	CCGGAAACCT
	ATAAAAGGTG	GTATAACGGC	AGAAAACCGT	TACACTCCCG	GGCCTTTGGA

4001	GGCCCTGTCT	TCTTGACGAG	CATTCTAGG	GGTCTTTCCC	CTCTCGCCAA
	CCGGGACAGA	AGAACTGCTC	GTAAGGATCC	CCAGAAAGGG	GAGAGCGGTT

4051	AGGAATGCAA	GGTCTGTTGA	ATGTCGTGAA	GGAAGCAGTT	CCTCTGGAAG
	TCCTTACGTT	CCAGACAAC	TACAGCACTT	CCTTCGTCAA	GGAGACCTTC

4101	CTTCTTGAAG	ACAAACAACG	TCTGTAGCGA	CCCTTTGCAG	GCAGCGGAAC
	GAAGAACTTC	TGTTTGTTGC	AGACATCGCT	GGGAAACGTC	CGTCGCCTTG

4151	CCCCACCTG	GCGACAGGTG	CCTCTGCGGC	CAAAGCCAC	GTGTATAAGA
	GGGGTGAG	CGCTGTCCAC	GGAGACGCCG	GTTTTCGGTG	CACATATTCT

4201	TACACCTGCA	AAGGCGGCAC	AACCCAGTG	CCACGTTGTG	AGTTGGATAG
	ATGTGGACGT	TTCCGCCGTG	TTGGGGTCAC	GGTGCAACAC	TCAACCTATC

4251	TTGTGGAAG	AGTCAAATGG	CTCTCCTCAA	GCGTATTCAA	CAAGGGGCTG
	AACACCTTTC	TCAGTTTACC	GAGAGGAGTT	CGCATAAGTT	GTTCCCCGAC

4301	AAGGATGCCC	AGAAGGTACC	CCATTGTATG	GGATCTGATC	TGGGGCCTCG
	TTCTTACGGG	TCTTCCATGG	GGTAACATAC	CCTAGACTAG	ACCCCGGAGC

4351	GTGCACATGC	TTTACATGTG	TTTAGTCGAG	GTTAAAAAAC	GTCTAGGCCC
	CACGTGTACG	AAATGTACAC	AAATCAGCTC	CAATTTTTTG	CAGATCCGGG

4401	CCCGAACAC	GGGGACGTGG	TTTTCTTTTG	AAAAACACGA	TGATAATACC
	GGGCTTGTTG	CCCCTGCACC	AAAAGGAAAC	TTTTTGTGCT	ACTATTATGG

4451	ATGAAAAAGC	CTGAACCTAC	CGCGACGTCT	GTCGAGAAGT	TTCTGATCGA
	TACTTTTTTCG	GACTTGAGTG	GCGCTGCAGA	CAGCTCTTCA	AAGACTAGCT

4501	AAAGTTCGAC	AGCGTCTCCG	ACCTGATGCA	GCTCTCGGAG	GGCGAAGAAT
	TTTCAAGCTG	TCGAGAGGC	TGGACTACGT	CGAGAGCCTC	CCGCTTCTTA

4551	CTCGTGCTTT	CAGCTTCGAT	GTAGGAGGGC	GTGGATATGT	CCTGCGGGTA
	GAGCACGAAA	GTCGAAGCTA	CATCCTCCCG	CACCTATACA	GGACGCCCAT

4601	AATAGCTGCG	CCGATGGTTT	CTACAAAGAT	CGTTATGTTT	ATCGGCACTT
	TTATCGACGC	GGCTACCAAA	GATGTTTCTA	GCAATACAAA	TAGCCGTGAA

4651	TGCATCGGCC	GCGCTCCCGA	TTCCGGAAGT	GCTTGACATT	GGGGAATTTA
	ACGTAGCCGG	GCGGAGGGCT	AAGGCCTTCA	CGAACTGTAA	CCCCTTAAAT

4701	GCGAGAGCCT	GACCTATTGC	ATCTCCCGCC	GTGCACAGGG	TGTCACGTTG
	CGCTCTCGGA	CTGGATAACG	TAGAGGGCGG	CACGTGTCCC	ACAGTGCAAC

4751 CAAGACCTGC CTGAAACCGA ACTGCCCCGCT GTTCTGCAGC CGGTGCGGGA
GTTCTGGACG GACTTTGGCT TGACGGGCGA CAAGACGTCG GCCAGCGCCT

4801 GGCCATGGAT GCGATCGCTG CGGCCGATCT TAGCCAGACG AGCGGGTTTCG
CCGGTACCTA CGCTAGCGAC GCCGCTAGA ATCGGTCTGC TCGCCCAAGC

4851 GCCCATTTCGG ACCGCAAGGA ATCGGTCAAT ACACTACATG GCGTGATTTTC
CGGGTAAGCC TGGCGTTCCT TAGCCAGTTA TGTGATGTAC CGCACTAAAG

4901 ATATGCGCGA TTGCTGATCC CCATGTGTAT CACTGGCAAA CTGTGATGGA
TATACGCGCT AACGACTAGG GGTACACATA GTGACCGTTT GACACTACCT

4951 CGACACCGTC AGTGCCTCCG TCGCGCAGGC TCTCGATGAG CTGATGCTTT
GCTGTGGCAG TCACGCAGGC AGCGCGTCCG AGAGCTACTC GACTACGAAA

5001 GGGCCGAGGA CTGCCCCGAA GTCCGGCACC TCGTGCACGC GGATTTTCGGC
CCCGGCTCCT GACGGGGCTT CAGGCCGTGG AGCACGTGCG CCTAAAGCCG

5051 TCCAACAATG TCCTGACGGA CAATGGCCGC ATAACAGCGG TCATTGACTG
AGGTTGTTAC AGGACTGCCT GTTACCGCG TATTGTGCGC AGTAACTGAC

5101 GAGCGAGGCG ATGTTCTGGGG ATTCCAATA CGAGGTCGCC AACATCTTCT
CTCGCTCCGC TACAAGCCCC TAAGGGTTAT GCTCCAGCGG TTGTAGAAGA

5151 TCTGGAGGCC GTGGTTGGCT TGTATGGAGC AGCAGACGCG CTACTTCGAG
AGACCTCCGG CACCAACCGA ACATACCTCG TCGTCTGCGC GATGAAGCTC

5201 CGGAGGCATC CGGAGCTTGC AGGATCGCCG CGGCTCCGGG CGTATATGCT
GCCTCCGTAG GCCTCGAACG TCCTAGCGGC GCCGAGGCCC GCATATACGA

5251 CCGCATTGGT CTTGACCAAC TCTATCAGAG CTTGGTTGAC GGCAATTTTCG
GGCGTAACCA GAACTGTTG AGATAGTCTC GAACCAACTG CCGTTAAAGC

5301 ATGATGCAGC TTGGGCGCAG GGTCGATGCG ACGCAATCGT CCGATCCGGA
TACTACGTCG AACCCGCGTC CCAGCTACGC TCGGTTAGCA GGCTAGGCCT

5351 GCCGGGACTG TCGGGCGTAC ACAAATCGCC CGCAGAAGCG CGGCCGTCTG
CGGCCCTGAC AGCCCGCATG TGTTTAGCGG GCGTCTTCGC GCCGGCAGAC

5401 GACCGATGGC TGTGTAGAAG TACTCGCCGA TAGTGAAAC CGACGCCCCA
CTGGCTACCG ACACATCTTC ATGAGCGGCT ATCACCTTTG GCTGCGGGGT

5451 GCACTCGTCC GAGGGCAAAG GAATAGAGTA GATGCCGACC GGGATCTATC
CGTGAGCAGG CTCCCGTTTC CTTATCTCAT CTACGGCTGG CCCTAGATAG

5501 GATAAAATAA AAGATTTTAT TTAGTCTCCA GAAAAAGGGG GGAATGAAAG
CTATTTTATT TTCTAAAATA AATCAGAGGT CTTTTTCCCC CCTTACTTTC

5551 ACCCCACCTG TAGGTTTGGC AAGCTAGCTT AAGTAACGCC ATTTTGCAAG
TGGGGTGGAC ATCCAAACCG TTCGATCGAA TTCATTGCGG TAAAACGTTT

5601 GCATGGAAAA ATACATAACT GAGAATAGAG AAGTTCAGAT CAAGGTCAGG
CGTACCTTTT TATGTATTGA CTCTTATCTC TTCAAGTCTA GTTCCAGTCC

5651 AACAGATGGA ACAGCTGAAT ATGGGCCAAA CAGGATATCT GTGGTAAGCA
TTGTCTACCT TGTCGACTTA TACCCGGTTT GTCCTATAGA CACCATTCGT

5701	GTTCTGCCC CAAGGACGGG	CGGCTCAGGG GCCGAGTCCC	CCAAGAACAG GGTTCCTGTC	ATGGAACAGC TACCTTGTCG	TGAATATGGG ACTTATACCC
5751	CCAAACAGGA GGTTTGTCCT	TATCTGTGGT ATAGACACCA	AAGCAGTTCC TTCGTCAAGG	TGCCCCGGCT ACGGGGCCGA	CAGGGCCAAG GTCCCGGTTC
5801	AACAGATGGT TTGTCTACCA	CCCCAGATGC GGGTCTACG	GGTCCAGCCC CCAGGTCGGG	TCAGCAGTTT AGTCGTCAAA	CTAGAGAACC GATCTCTTGG
5851	ATCAGATGTT TAGTCTACAA	TCCAGGGTGC AGGTCCCACG	CCCAAGGACC GGGTTCTCTG	TGAAATGACC ACTTTACTGG	CTGTGCCTTA GACACGGAAT
5901	TTTGAACATA AAACTTGATT	CCAATCAGTT GGTTAGTCAA	CGCTTCTCGC GCGAAGAGCG	TTCTGTTCGC AAGACAAGCG	GCGCTTCTGC CGCGAAGACG
5951	TCCCCGAGCT AGGGGCTCGA	CAATAAAAGA GTTATTTTCT	GCCCCACAAC CGGGTGTTGG	CCTCACTCGG GGAGTGAGCC	GGCGCCAGTC CCGCGGTCAG
6001	CTCCGATTGA GAGGCTAACT	CTGAGTCGCC GACTCAGCGG	CGGGTACCCG GCCCCATGGG	TGTATCCAAT ACATAGGTTA	AAACCCCTCT TTTGGGAGAA
6051	GCAGTTGCAT CGTCAACGTA	CCGACTTGTG GGTGAAACAC	GTCTCGCTGT CAGAGCGACA	TCCTTGGGAG AGGAACCCTC	GGTCTCCTCT CCAGAGGAGA
6101	GAGTGATTGA CTCACTAACT	CTACCCGTCA GATGGGCAGT	GCGGGGGTCT CGCCCCCAGA	TTCATTATG AAGTAAGTAC	CAGCATGTAT GTCGTACATA
6151	CAAAATTAAT GTTTTAATTA	TTGGTTTTTT AACCAAAAAA	TTCTTAAGTA AAGAATTCAT	TTTACATTAA AAATGTAATT	ATGGCCATAG TACCGGTATC
6201	TTGCATTAAT AACGTAATTA	GAATCGGCCA CTTAGCCGGT	ACGCGCGGGG TGCGCGCCCC	AGAGGCGGTT TCTCCGCCAA	TGCGTATTGG ACGCATAACC
6251	CGCTCTTCCG GCGAGAAGGC	CTTCCTCGCT GAAGGAGCGA	CACTGACTCG GTGACTGAGC	CTGCGCTCGG GACGCGAGCC	TCGTTCCGGT AGCAAGCCGA
6301	GCGGCGAGCG CGCCGCTCGC	GTATCAGCTC CATAGTCGAG	ACTCAAAGGC TGAGTTTCCG	GGTAATACGG CCATTATGCC	TTATCCACAG AATAGGTGTC
6351	AATCAGGGGA TTAGTCCCTT	TAACGCAGGA ATTGCGTCCT	AAGAACATGT TTCTTGTAACA	GAGCAAAAGG CTCGTTTTCC	CCAGCAAAAG GGTCGTTTTT
6401	GCCAGGAACC CGGTCCTTGG	GTAATAAAGG CATTTTTCCG	CGCGTTGCTG GCGCAACGAC	GCGTTTTTCC CGCAAAAGG	ATAGGCTCCG TATCCGAGGC
6451	CCCCCTGAC GGGGGACTG	GAGCATCACA CTCGTAGTGT	AAAATCGACG TTTTAGCTGC	CTCAAGTCAG GAGTTCAGTC	AGGTGGCGAA TCCACCGCTT
6501	ACCCGACAGG TGGGCTGTCC	ACTATAAAGA TGATATTCTT	TACCAGGCGT ATGGTCCGCA	TTCCCCCTGG AAGGGGGACC	AAGCTCCCTC TTCGAGGGAG
6551	GTGCGCTCTC CACGCGAGAG	CTGTTCCGAC GACAAGGCTG	CCTGCCGCTT GGACGGCGAA	ACCGGATACC TGGCCTATGG	TGTCCGCCTT ACAGGCGGAA
6601	TCTCCCTTCG AGAGGGAAGC	GGAAGCGTGG CCTTCGCACC	CGCTTTCTCA GCGAAAGAGT	TAGCTCACGC ATCGAGTGCG	TGTAGGTATC ACATCCATAG

6651 TCAGTTCGGT GTAGGTCGTT CGCTCCAAGC TGGGCTGTGT GCACGAACCC
AGTCAAGCCA CATCCAGCAA GCGAGGTTCTG ACCCGACACA CGTGCTTGGG

6701 CCCGTTTCAGC CCGACCGCTG CGCCTTATCC GGTAACATATC GTCTTGAGTC
GGGCAAGTCG GGCTGGCGAC GCGGAATAGG CCATTGATAG CAGAACTCAG

6751 CAACCCGGTA AGACACGACT TATCGCCACT GGCAGCAGCC ACTGGTAACA
GTTGGGCCAT TCTGTGCTGA ATAGCGGTGA CCGTCGTCTG TGACCATTGT

6801 GGATTAGCAG AGCGAGGTAT GTAGGCGGTG CTACAGAGTT CTTGAAGTGG
CCTAATCGTC TCGCTCCATA CATCCGCCAC GATGTCTCAA GAACTTCACC

6851 TGGCCTAACT ACGGCTACAC TAGAAGAACA GTATTTGGTA TCTGCGCTCT
ACCGGATTGA TGCCGATGTG ATCTTCTTGT CATAAACCAT AGACGCGAGA

6901 GCTGAAGCCA GTTACCTTCG GAAAAAGAGT TGGTAGCTCT TGATCCGGCA
CGACTTCGGT CAATGGAAGC CTTTTTCTCA ACCATCGAGA ACTAGGCCGT

6951 AACAAACCAC CGCTGGTAGC GGTGGTTTTT TTGTTTGCAA GCAGCAGATT
TTGTTTGGTG GCGACCATCG CCACCAAAAA AACAAACGTT CGTCGTCTAA

7001 ACGCGCAGAA AAAAAGGATC TCAAGAAGAT CCTTTGATCT TTTCTACGGG
TGCGCGTCTT TTTTCTCTAG AGTTCTTCTA GGAAACTAGA AAAGATGCCC

7051 GTCTGACGCT CAGTGGAACG AAAACTCACG TTAAGGGATT TTGGTCATGA
CAGACTGCGA GTCACCTTGC TTTTGAGTGC AATTCCCTAA AACCAGTACT

7101 GATTATCAAA AAGGATCTTC ACCTAGATCC TTTTAAATTA AAAATGAAGT
CTAATAGTTT TTCCTAGAAG TGGATCTAGG AAAATTTAAT TTTTACTTCA

7151 TTGCGGCCGC AAATCAATCT AAAGTATATA TGAGTAAACT TGGTCTGACA
AACGCCGGCG TTTAGTTAGA TTTCATATAT ACTCATTGTA ACCAGACTGT

7201 GTTACCAATG CTTAATCAGT GAGGCACCTA TCTCAGCGAT CTGTCTATTT
CAATGGTTAC GAATTAGTCA CTCCTGGGAT AGAGTCGCTA GACAGATAAA

7251 CGTTCATCCA TAGTTGCCTG ACTCCCCGTC GTGTAGATAA CTACGATACG
GCAAGTAGGT ATCAACGGAC TGAGGGGCAG CACATCTATT GATGCTATGC

7301 GGAGGGCTTA CCATCTGGCC CCAGTGCTGC AATGATACCG CGAGACCCAC
CCTCCCGAAT GGTAGACCGG GGTCACGACG TTACTATGGC GCTCTGGGTG

7351 GCTCACCAGC TCCAGATTTA TCAGCAATAA ACCAGCCAGC CGGAAGGGCC
CGAGTGGCCG AGGTCTAAAT AGTCGTTATT TGGTCGGTCG GCCTTCCCGG

7401 GAGCGCAGAA GTGGTCTGTC AACTTTATCC GCCTCCATCC AGTCTATTAA
CTCGCGTCTT CACCAGGACG TTGAAATAGG CGGAGGTAGG TCAGATAATT

7451 TTGTTGCCCG GAAGCTAGAG TAAGTAGTTC GCCAGTTAAT AGTTTGCGCA
AACAACGGCC CTTGATCTC ATTCATCAAG CGGTCAATTA TCAAACGCGT

7501 ACGTTGTTGC CATTGCTACA GGCATCGTGG TGTCACGCTC GTCGTTTGGT
TGCAACAACG GTAACGATGT CCGTAGCACC ACAGTGCGAG CAGCAAACCA

7551 ATGGCTTCAT TCAGCTCCGG TTCCCAACGA TCAAGGCGAG TTACATGATC
TACCGAAGTA AGTCGAGGCC AAGGGTTGCT AGTTCCGCTC AATGTACTAG

7601 CCCCATGTTG TGCAAAAAAG CGGTTAGCTC CTTCCGGTCCT CCGATCGTTG
 GGGGTACAAC ACGTTTTTTC GCCAATCGAG GAAGCCAGGA GGCTAGCAAC

 7651 TCAGAAGTAA GTTGGCCGCA GTGTTATCAC TCATGGTTAT GGCAGCACTG
 AGTCTTCATT CAACCGGCGT CACAATAGTG AGTACCAATA CCGTCGTGAC

 7701 CATAATTCTC TTAGTGTGAT GCCATCCGTA AGATGCTTTT CTGTGACTGG
 GTATTAAGAG AATGACAGTA CGGTAGGCAT TCTACGAAAA GACACTGACC

 7751 TGAGTACTCA ACCAAGTCAT TCTGAGAATA GTGTATGCGG CGACCGAGTT
 ACTCATGAGT TGGTTCAGTA AGACTCTTAT CACATACGCC GCTGGCTCAA

 7801 GCTCTTGCCC GCGTCAATA CGGGATAATA CCGCGCCACA TAGCAGAACT
 CGAGAACGGG CCGCAGTTAT GCCCTATTAT GCGCGGGTGT ATCGTCTTGA

 7851 TTAAAAGTGC TCATCATTGG AAAACGTTCT TCGGGGCGAA AACTCTCAAG
 AATTTTCACG AGTAGTAACC TTTTGCAAGA AGCCCCGCTT TTGAGAGTTC

 7901 GATCTTACCG CTGTTGAGAT CCAGTTCGAT GTAACCCACT CGTGCACCCA
 CTAGAATGGC GACAACTCTA GGTCAAGCTA CATTGGGTGA GCACGTGGGT

 7951 ACTGATCTTC AGCATCTTTT ACTTTCACCA GCGTTTCTGG GTGAGCAAAA
 TGACTAGAAG TCGTAGAAAA TGAAAGTGGT CGCAAAGACC CACTCGTTTT

 8001 ACAGGAAGGC AAAATGCCGC AAAAAAGGGA ATAAGGGCGA CACGGAAATG
 TGTCCCTCCG TTTTACGGCG TTTTTCCTCT TATTCCCGCT GTGCCTTTAC

 8051 TTGAATACTC ATACTCTTCC TTTTCAATA TTATTGAAGC ATTTATCAGG
 AACTTATGAG TATGAGAAGG AAAAAGTTAT AATAACTTCG TAAATAGTCC

 8101 GTTATTGTCT CATGAGCGGA TACATATTTG AATGTATTTA GAAAAATAAA
 CAATAACAGA GTACTCGCCT ATGTATAAAC TTACATAAAT CTTTTTATTT

 8151 CAAATAGGGG TTCCGCGCAC ATTTT
 GTTTATCCCC AAGGCGCGTG TAAAG

03/59152.011601

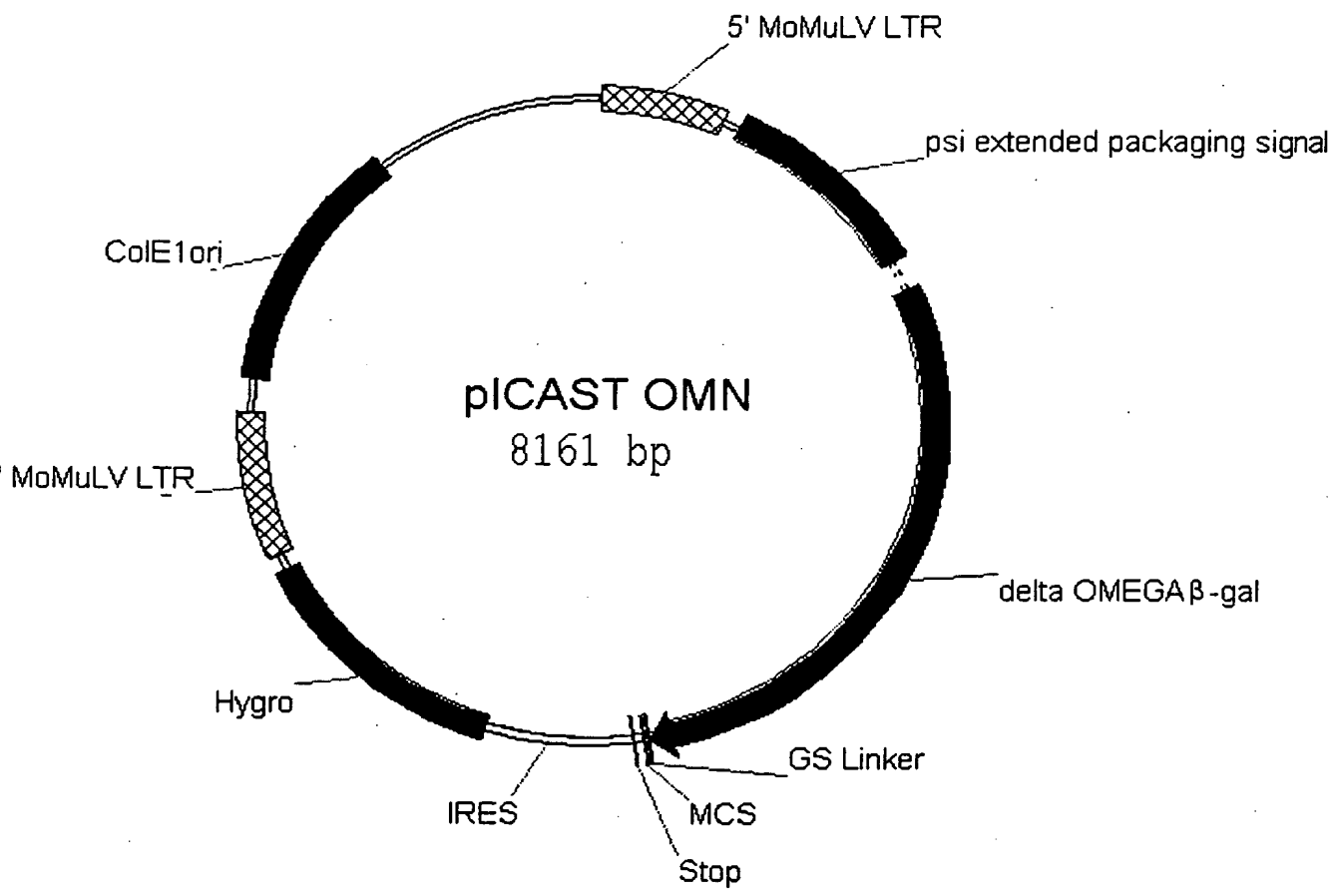


Figure 13A

1	CTGCAGCCTG	AATATGGGCC	AAACAGGATA	TCTGTGGTAA	GCAGTTCCTG
	GACGTCGGAC	TTATACCCGG	TTTGTCTTAT	AGACACCATT	CGTCAAGGAC

51	CCCCGGCTCA	GGGCCAAGAA	CAGATGGAAC	AGCTGAATAT	GGGCCAAACA
	GGGGCCGAGT	CCCGGTCTTT	GTCTACCTTG	TCGACTTATA	CCCGGTTTGT

101	GGATATCTGT	GGTAAGCAGT	TCCTGCCCCG	GCTCAGGGCC	AAGAACAGAT
	CCTATAGACA	CCATTTCGTCA	AGGACGGGGC	CGAGTCCCGG	TTCTTGTCTA

151	GGTCCCCAGA	TGCGGTCCAG	CCCTCAGCAG	TTTCTAGAGA	ACCATCAGAT
	CCAGGGGTCT	ACGCCAGGTC	GGGAGTCGTC	AAAGATCTCT	TGGTAGTCTA

201	GTTTCCAGGG	TGCCCCAAGG	ACCTGAAATG	ACCCTGTGCC	TTATTTGAAC
	CAAAGGTCCC	ACGGGGTTCC	TGGACTTTAC	TGGGACACGG	AATAAACTTG

251	TAACCAATCA	GTTTCGCTTCT	CGCTTCTGTT	CGCGCGCTTC	TGCTCCCCGA
	ATTGGTTAGT	CAAGCGAAGA	GCGAAGACAA	GCGCGCGAAG	ACGAGGGGCT

301	GCTCAATAAA	AGAGCCCACA	ACCCCTCACT	CGGGGCGCCA	GTCCTCCGAT
	CGAGTTATTT	TCTCGGGTGT	TGGGGAGTGA	GCCCCGCGGT	CAGGAGGCTA

351	TGACTGAGTC	GCCCCGGTAC	CCGTGTATCC	AATAAACCCCT	CTTGCACTTG
	ACTGACTCAG	CGGGCCCATG	GGCACATAGG	TTATTTGGGA	GAACGTCAAC

401	CATCCGACTT	GTGGTCTCGC	TGTTCTTTGG	GAGGGTCTCC	TCTGAGTGAT
	GTAGGCTGAA	CACCAGAGCG	ACAAGGAACC	CTCCCAGAGG	AGACTCACTA

451	TGACTACCCG	TCAGCGGGGG	TCTTTCATTT	GGGGGCTCGT	CCGGGATCGG
	ACTGATGGGC	AGTCGCCCCC	AGAAAGTAAA	CCCCCGAGCA	GGCCCTAGCC

501	GAGACCCCTG	CCCAGGGACC	ACCGACCCAC	CACCGGGAGG	CAAGCTGGCC
	CTCTGGGGAC	GGGTCCCTGG	TGGCTGGGTG	GTGGCCCTCC	GTTTCGACCG

551	AGCAACTTAT	CTGTGTCTGT	CCGATTGTCT	AGTGTCTATG	ACTGATTTTA
	TCGTTGAATA	GACACAGACA	GGCTAACAGA	TCACAGATAC	TGACTAAAAT

601	TGCGCCTGCG	TCGGTACTAG	TTAGCTAACT	AGCTCTGTAT	CTGGCGGACC
	ACGCGGACGC	AGCCATGATC	AATCGATTGA	TCGAGACATA	GACCGCCTGG

651	CGTGGTGGAA	CTGACGAGTT	CTGAACACCC	GGCCGCAACC	CTGGGAGACG
	GCACCACCTT	GACTGCTCAA	GACTTGTGGG	CCGGCGTTGG	GACCCCTCTGC

701	TCCCAGGGAC	TTTGGGGGCC	GTTTTTGTGG	CCCACCTGA	GGAAGGGAGT
	AGGGTCCCTG	AAACCCCCGG	CAAAAACACC	GGGCTGGACT	CCTTCCCTCA

751	CGATGTGGAA	TCCGACCCCG	TCAGGATATG	TGGTTCTGGT	AGGAGACGAG
	GCTACACCTT	AGGCTGGGGC	AGTCCTATAC	ACCAAGACCA	TCCTCTGCTC

801	AACCTAAAAAC	AGTTCCCGCC	TCCGTCTGAA	TTTTTGCTTT	CGGTTTGGAA
	TTGGATTTTG	TCAAGGGCGG	AGGCAGACTT	AAAAACGAAA	GCCAAACCTT

851	CCGAAGCCGC	GCGTCTTGTC	TGCTGCAGCA	TCGTTCTGTG	TTGTCTCTGT
	GGCTTCGGCG	CGCAGAACAG	ACGACGTCGT	AGCAAGACAC	AACAGAGACA

901	CTGACTGTGT	TTCTGTATTT	GTCTGAAAAT	TAGGGCCAGA	CTGTTACCAC
	GACTGACACA	AAGACATAAA	CAGACTTTTA	ATCCCGGTCT	GACAATGGTG

FIGURE 13B

951	TCCCTTAAGT AGGGAAATCA	TTGACCTTAG AACTGGAATC	GTAAC TGGAA CATTGACCTT	AGATGTCGAG TCTACAGCTC	CGGCTCGCTC GCCGAGCGAG
1001	ACAACCAGTC TGTTGGTCAG	GGTAGATGTC CCATCTACAG	AAGAAGAGAC TTCTTCTCTG	GTTGGGTAC CAACCCAATG	CTTCTGCTCT GAAGACGAGA
1051	GCAGAATGGC CGTCTTACCG	CAACCTTTAA GTTGGAAATT	CGTCGGATGG GCAGCCTACC	CCGCGAGACG GGCGCTCTGC	GCACCTTTAA CGTGGAAATT
1101	CCGAGACCTC GGCTCTGGAG	ATCACCCAGG TAGTGGGTCC	TTAAGATCAA AATTCTAGTT	GGTCTTTTCA CCAGAAAAGT	CCTGGCCCGC GGACCGGGCG
1151	ATGGACACCC TACCTGTGGG	AGACCAGGTC TCTGGTCCAG	CCCTACATCG GGGATGTAGC	TGACCTGGGA ACTGGACCCT	AGCCTTGGCT TCGGAACCGA
1201	TTTGACCCCC AAACTGGGGG	CTCCCTGGGT GAGGGACCCA	CAAGCCCTTT GTTCCGGAAA	GTACACCCTA CATGTGGGAT	AGCCTCCGCC TCGGAGGCGG
1251	TCCTCTTCCT AGGAGAAGGA	CCATCCGCCC GGTAGGCGGG	CGTCTCTCCC GCAGAGAGGG	CCTTGAACCT GGAACCTGGA	CCTCGTTCGA GGAGCAAGCT
1301	CCCCGCCTCG GGGGCGGAGC	ATCCTCCCTT TAGGAGGGAA	TATCCAGCCC ATAGGTCGGG	TCACTCCTTC AGTGAGGAAG	TCTAGGCGCC AGATCCGCGG
1351	GGCCGCTCTA CCGGCGAGAT	GCCCATTAAT CGGGTAATTA	ACGACTCACT TGCTGAGTGA	ATAGGGCGAT TATCCCGCTA	TCGAACACCA AGCTTGTGGT
1401	TGCACCATCA ACGTGGTAGT	TCATCATCAC AGTAGTAGTG	GTCGACGAAC CAGCTGCTTG	AGAAACTCAT TCTTTGAGTA	TTCCGAAGAA AAGGCTTCTT
1451	GACCTACTCG CTGGATGAGC	AGATGGGCGT TCTACCCGCA	GATTACGGAT CTAATGCCTA	TCACTGGCCG AGTGACCGGC	TCGTTTTACA AGCAAAATGT
1501	ACGTCGTGAC TGCAGCACTG	TGGGAAAACC ACCCTTTTGG	CTGGCGTTAC GACCGCAATG	CCAACTTAAT GGTTGAATTA	CGCCTTGCAG GCGGAACGTC
1551	CACATCCCCC GTGTAGGGGG	TTTCGCCAGC AAAGCGGTCTG	TGGCGTAATA ACCGCATAT	GCGAAGAGGC CGCTTCTCCG	CCGCACCGAT GGCGTGGCTA
1601	CGCCCTTCCC GCGGGAAGGG	AACAGTTACG TTGTCAATGC	CAGCCTGAAT GTCGGACTTA	GGCGAATGGC CCGCTTACCG	GCTTTGCCTG CGAAACGGAC
1651	GTTTCCGGCA CAAAGGCCGT	CCAGAAGCGG GGTCTTCGCC	TGCCGAAAAG ACGGCCTTTC	CTGGCTGGAG GACCGACCTC	TGCGATCTTC ACGCTAGAAG
1701	CTGAGGCCGA GACTCCGGCT	TACTGTCGTC ATGACAGCAG	GTCCCTCAA CAGGGGAGTT	ACTGGCAGAT TGACCGTCTA	GCACGGTTAC CGTGCCAATG
1751	GATGCGCCCA CTACGCGGGT	TCTACACCAA AGATGTGGTT	CGTGACCTAT GCACTGGATA	CCCATTACGG GGGTAATGCC	TCAATCCGCC AGTTAGGCGG
1801	GTTTGTTCCC CAAACAAGGG	ACGGAAGAATC TGCCTCTTAG	CGACGGGTTG GCTGCCCAAC	TTACTCGCTC AATGAGCGAG	ACATTTAATG TGTAATTAC
1851	TTGATGAAAG AACTACTTTC	CTGGCTACAG GACCGATGTC	GAAGGCCAGA CTTCCGGTCT	CGCGAATTAT GCGCTTAATA	TTTGATGGC AAAAC TACCG

1901	GTAACTCGG CAATTGAGCC	CGTTTCATCT GCAAAGTAGA	GTGGTGCAAC CACCACGTTG	GGGCGCTGGG CCC GCGACCC	TCGGTTACGG AGCCAATGCC
1951	CCAGGACAGT GGTCCTGTCA	CGTTTGCCGT GCAAACGGCA	CTGAATTTGA GACTTAAACT	CCTGAGCGCA GGACTCGCGT	TTTTTACGCG AAAAATGCGC
2001	CCGGAGAAAA GGCCTCTTTT	CCGCCTCGCG GGCGGAGCGC	GTGATGGTGC CACTACCACG	TGCGCTGGAG ACGCGACCTC	TGACGGCAGT ACTGCCGTCA
2051	TATCTGGAAG ATAGACCTTC	ATCAGGATAT TAGTCCTATA	GTGGCGGATG CACCGCCTAC	AGCGGCATTT TCGCCGTAAA	TCCGTGACGT AGGCACTGCA
2101	CTCGTTGCTG GAGCAACGAC	CATAAACCGA GTATTTGGCT	CTACACAAAT GATGTGTTTA	CAGCGATTTT GTCGCTAAAG	CATGTTGCCA GTACAACGGT
2151	CTCGCTTTAA GAGCGAAATT	TGATGATTTT ACTACTAAAG	AGCCGCGCTG TCGGCGCGAC	TACTGGAGGC ATGACCTCCG	TGAAGTTCAG ACTTCAAGTC
2201	ATGTGCGGCG TACACGCCGC	AGTTGCGTGA TCAACGCACT	CTACCTACGG GATGGATGCC	GTAACAGTTT CATTGTCAAA	CTTTATGGCA GAAATACCGT
2251	GGGTGAAACG CCCACTTTGC	CAGGTCGCCA GTCCAGCGGT	GCGGCACCGC CGCCGTGGCG	GCCTTTCGGC CGGAAAGCCG	GGTGAAATTA CCACTTTAAT
2301	TCGATGAGCG AGCTACTCGC	TGGTGGTTAT ACCACCAATA	GCCGATCGCG CGGCTAGCGC	TCACACTACG AGTGTGATGC	TCTGAACGTC AGACTTGCAG
2351	GAAAACCCGA CTTTTGGGCT	AACTGTGGAG TTGACACCTC	CGCCGAAATC GCGGCTTTAG	CCGAATCTCT GGCTTAGAGA	ATCGTGCGGT TAGCACGCCA
2401	GGTTGAACTG CCAAC TTGAC	CACACCGCCG GTGTGGCGGC	ACGGCACGCT TGCCGTGCGA	GATTGAAGCA CTAACTTCGT	GAAGCCTGCG CTTCGGACGC
2451	ATGTCGGTTT TACAGCCAAA	CCGCGAGGTG GGCGCTCCAC	CGGATTGAAA GCCTAACTTT	ATGGTCTGCT TACCAGACGA	GCTGCTGAAC CGACGACTTG
2501	GGCAAGCCGT CCGTTGCGCA	TGCTGATTCG ACGACTAAGC	AGGCGTTAAC TCCGCAATTG	CGTCACGAGC GCAGTGCTCG	ATCATCCTCT TAGTAGGAGA
2551	GCAATGGTCAG CGTACCAGTC	GTCATGGATG CAGTACCTAC	AGCAGACGAT TCGTCTGCTA	GGTGCAGGAT CCACGTCCTA	ATCCTGCTGA TAGGACGACT
2601	TGAAGCAGAA ACTTCGTCTT	CAACTTTAAC GTTGAAATTG	GCCGTGCGCT CGGCACGCGA	GTTTCGCATTA CAAGCGTAAT	TCCGAACCAT AGGCTTGGTA
2651	CCGCTGTGGT GGCGACACCA	ACACGCTGTG TGTGCGACAC	CGACCGCTAC GCTGGCGATG	GGCCTGTATG CCGGACATAC	TGGTGGATGA ACCACCTACT
2701	AGCCAATATT TCGGTTATAA	GAAACCCACG CTTTGGGTGC	GCAATGGTGC CGTACCACGG	AATGAATCGT TTACTTAGCA	CTGACCGATG GACTGGCTAC
2751	ATCCGCGCTG TAGGCGCGAC	GCTACCGGCG CGATGGCCGC	ATGAGCGAAC TACTCGCTTG	GCGTAACGCG CGCATTGCGC	AATGGTGCAG TTACCACGTC
2801	CGCGATCGTA GCGCTAGCAT	ATCACCCGAG TAGTGGGCTC	TGTGATCATC ACACTAGTAG	TGGTCGCTGG ACCAGCGACC	GGAATGAATC CCTTACTTAG

2851	AGGCCACGGC TCCGGTGCCG	GCTAATCACG CGATTAGTGC	ACGCGCTGTA TGCGCGACAT	TCGCTGGATC AGCGACCTAG	AAATCTGTCTG TTTAGACAGC

2901	ATCCTTCCCC TAGGAAGGGC	CCCGGTGCAG GGGCCACGTC	TATGAAGGCG ATACTTCCGC	GCGGAGCCGA CGCCTCGGCT	CACCACGGCC GTGGTGCCCG

2951	ACCGATATTA TGGCTATAAT	TTTGCCCGAT AAACGGGCTA	GTACGCGCGC CATGCGCGCG	GTGGATGAAG CACCTACTTC	ACCAGCCCTT TGGTCGGGAA

3001	CCCGGCTGTG GGGCCGACAC	CCGAAATGGT GGCTTTACCA	CCATCAAAAA GGTAGTTTTT	ATGGCTTTTCG TACCGAAAGC	CTACCTGGAG GATGGACCTC

3051	AGACGCGCCC TCTGCGCGGG	GCTGATCCTT CGACTAGGAA	TGCGAATACG ACGCTTATGC	CCCACGCGAT GGGTGCGCTA	GGGTAACAGT CCCATTGTCA

3101	CTTGGCGGTT GAACCGCCAA	TCGCTAAATA AGCGATTTAT	CTGGCAGGCG GACCGTCCGC	TTTCGTCACT AAAGCAGTCA	ATCCCCGTTT TAGGGGCAAA

3151	ACAGGGCGGC TGTCGCGCCG	TTCGTCTGGG AAGCAGACCC	ACTGGGTGGA TGACCCACCT	TCAGTCGCTG AGTCAGCGAC	ATTAAATATG TAATTTATAC

3201	ATGAAAACGG TACTTTTGCC	CAACCCGTGG GTTGGGCACC	TCGGCTTACG AGCCGAATGC	GCGGTGATTT CGCCACTAAA	TGGCGATACG ACCGCTATGC

3251	CCGAACGATC GGCTTGCTAG	GCCAGTTCTG CGGTCAAGAC	TATGAACGGT ATACTTGCCA	CTGGTCTTTG GACCAGAAAC	CCGACCGCAC GGCTGGCGTG

3301	GCCGCATCCA CGGCGTAGGT	GCGCTGACGG CGCGACTGCC	AAGCAAAACA TTCGTTTTGT	CCAGCAGCAG GGTCGTCGTC	TTTTTCCAGT AAAAAGGTCA

3351	TCCGTTTATC AGGCAAATAG	CGGGCAAACC GCCCCGTTTG	ATCGAAGTGA TAGCTTCACT	CCAGCGAATA GGTCGCTTAT	CCTGTTCCGT GGACAAGGCA

3401	CATAGCGATA GTATCGCTAT	ACGAGCTCCT TGCTCGAGGA	GCACTGGATG CGTGACCTAC	GTGGCGCTGG CACCGCGACC	ATGGTAAGCC TACCATTCCG

3451	GCTGGCAAGC CGACCGTTTC	GGTGAAGTGC CCACTTCACG	CTCTGGATGT GAGACCTACA	CGCTCCACAA GCGAGGTGTT	GGTAAACAGT CCATTTGTCA

3501	TGATTGAACT ACTAACTTGA	GCCTGAACTA CGGACTTGAT	CCGCAGCCCG GGCGTCGGCC	AGAGCGCCCG TCTCGCGGCC	GCAACTCTGG CGTTGAGACC

3551	CTCACAGTAC GAGTGTCATG	GCGTAGTGCA CGCATCACGT	ACCGAACGCG TGGCTTGCGC	ACCGCATGGT TGGCGTACCA	CAGAAGCCGG GTCTTCGGCC

3601	GCACATCAGC CGTGTAGTCG	GCCTGGCAGC CGGACCGTCG	AGTGGCGTCT TCACCGCAGA	GGCGGAAAAC CCGCCTTTTG	CTCAGTGTGA GAGTCACACT

3651	CGCTCCCCGC GCGAGGGGCG	CGCGTCCCAC GCGCAGGGTG	GCCATCCCGC CGGTAGGGCG	ATCTGACCAC TAGACTGGTG	CAGCGAAATG GTCGCTTTAC

3701	GATTTTTGCA CTAAAAACGT	TCGAGCTGGG AGCTCGACCC	TAATAAGCGT ATTATTCGCA	TGGCAATTTA ACCGTTAAAT	ACCGCCAGTC TGGCGGTCAG

3751	AGGCTTTCTT TCCGAAAGAA	TCACAGATGT AGTGTCTACA	GGATTGGCGA CCTAACCGCT	TAAAAAACAA ATTTTTTGTT	CTGCTGACGC GACGACTGCG

3801	CGCTGCGCGA	TCAGTTCACC	CGTGTCGATA	GATCTGGAGG	TGGTGGCAGC
	GCGACGCGCT	AGTCAAGTGG	GCACAGCTAT	CTAGACCTCC	ACCACCGTCG

3851	AGGCCTTGGC	GCGCCGGATC	CTTAATTAAC	AATTGACCGG	TAATAATAGG
	TCCGGAACCG	CGCGGCCTAG	GAATTAATTG	TTAACTGGCC	ATTATTATCC

3901	TAGATAAGTG	ACTGATTAGA	TGCATTTCTGA	CTAGATCCCT	CGACCAATTC
	ATCTATTAC	TGACTAATCT	ACGTAAAGCT	GATCTAGGGA	GCTGGTTAAG

3951	CGGTTATTTT	CCACCATATT	GCCGTCTTTT	GGCAATGTGA	GGGCCCCGAA
	GCCAATAAAA	GGTGGTATAA	CGGCAGAAAA	CCGTTACACT	CCCGGGCCTT

4001	ACCTGGCCCT	GTCTTCTTGA	CGAGCATTC	TAGGGGTCTT	TCCCCTCTCG
	TGGACCGGGA	CAGAAGAACT	GCTCGTAAGG	ATCCCCAGAA	AGGGGAGAGC

4051	CCAAAGGAAT	GCAAGGTCTG	TTGAATGTCG	TGAAGGAAGC	AGTTCCTCTG
	GGTTTCCTTA	CGTTCCAGAC	AACTTACAGC	ACTTCCTTCG	TCAAGGAGAC

4101	GAAGCTTCTT	GAAGACAAAC	AACGTCTGTA	GCGACCCCTT	GCAGGCAGCG
	CTTCGAAGAA	CTTCTGTTTG	TTGCAGACAT	CGCTGGGAAA	CGTCCGTCGC

4151	GAACCCCCCA	CCTGGCGACA	GGTGCCTCTG	CGGCCAAAAG	CCACGTGTAT
	CTTGGGGGGT	GGACCGCTGT	CCACGGAGAC	GCCGGTTTTT	GGTGCACATA

4201	AAGATACACC	TGCAAAGGCG	GCACAACCCC	AGTGCCACGT	TGTGAGTTGG
	TTCTATGTGG	ACGTTTCCGC	CGTGTGGGG	TCACGGTGCA	ACACTCAACC

4251	ATAGTTGTGG	AAAGAGTCAA	ATGGCTCTCC	TCAAGCGTAT	TCAACAAGGG
	TATCAACACC	TTTCTCAGTT	TACCGAGAGG	AGTTCGCATA	AGTTGTTCCC

4301	GCTGAAGGAT	GCCCAGAAGG	TACCCCATTG	TATGGGATCT	GATCTGGGGC
	CGACTTCCTA	CGGGTCTTCC	ATGGGGTAAC	ATACCCTAGA	CTAGACCCCG

4351	CTCGGTGCAC	ATGCTTTACA	TGTGTTTAGT	CGAGGTAAAA	AAACGTCTAG
	GAGCCACGTG	TACGAAATGT	ACACAAATCA	GCTCCAATTT	TTTGCAGATC

4401	GCCCCCGGAA	CCACGGGGAC	GTGGTTTTCC	TTTGAAAAAC	ACGATGATAA
	CGGGGGGCTT	GGTGCCCCTG	CACCAAAAGG	AAACTTTTTG	TGCTACTATT

4451	TACCATGAAA	AAGCCTGAAC	TCACCGCGAC	GTCTGTGCGAG	AAGTTTCTGA
	ATGGTACTTT	TTCGGACTTG	AGTGGCGCTG	CAGACAGCTC	TTCAAAGACT

4501	TCGAAAAGTT	CGACAGCGTC	TCCGACCTGA	TGCAGCTCTC	GGAGGGCGAA
	AGCTTTTCAA	GCTGTGCGAG	AGGCTGGACT	ACGTCGAGAG	CCTCCCGCTT

4551	GAATCTCGTG	CTTTCAGCTT	CGATGTAGGA	GGGCGTGGAT	ATGTCCTGCG
	CTTAGAGCAC	GAAAGTCGAA	GCTACATCCT	CCCGCACCTA	TACAGGACGC

4601	GGTAAATAGC	TGCGCCGATG	GTTTCTACAA	AGATCGTTAT	GTTTATCGGC
	CCATTTATCG	ACGCGGCTAC	CAAAGATGTT	TCTAGCAATA	CAAATAGCCG

4651	ACTTTGCATC	GGCCGCGCTC	CCGATTCCGG	AAGTGCTTGA	CATTGGGGAA
	TGAAACGTAG	CCGGCGCGAG	GGCTAAGGCC	TTCACGAACT	GTAACCCCTT

4701	TTTAGCGAGA	GCCTGACCTA	TTGCATCTCC	CGCCGTGCAC	AGGGTGTAC
	AAATCGCTCT	CGGACTGGAT	AACGTAGAGG	GCGGCACGTG	TCCCACAGTG

4751	GTTGCAAGAC CAACGTTCTG	CTGCCTGAAA GACGGACTTT	CCGAACTGCC GGCTTGACGG	CGCTGTTCTG GCGACAAGAC	CAGCCGGTCG GTCGGCCAGC

4801	CGGAGGCCAT GCCTCCGGTA	GGATGCGATC CCTACGCTAG	GCTGCGGCCG CGACGCCGGC	ATCTTAGCCA TAGAATCGGT	GACGAGCGGG CTGCTCGCCC

4851	TTCGGCCCAT AAGCCGGGTA	TCGGACCGCA AGCCTGGCGT	AGGAATCGGT TCCTTAGCCA	CAATACACTA GTTATGTGAT	CATGGCGTGA GTACCGCACT

4901	TTTCATATGC AAAGTATACG	GCGATTGCTG CGCTAACGAC	ATCCCCATGT TAGGGGTACA	GTATCACTGG CATAGTGACC	CAAACGTGTA GTTTGACACT

4951	TGGACGACAC ACCTGCTGTG	CGTCAGTGCG GCAGTCACGC	TCCGTCGCGC AGGCAGCGCG	AGGCTCTCGA TCCGAGAGCT	TGAGCTGATG ACTCGACTAC

5001	CTTTGGGCCG GAAACCCGGC	AGGACTGCCC TCCTGACGGG	CGAAGTCCGG GCTTCAGGCC	CACCTCGTGC GTGGAGCAGC	ACGCGGATTT TGCGCCTAAA

5051	CGGCTCCAAC GCCGAGGTTG	AATGTCTCTG TTACAGGACT	CGGACAATGG GCCTGTTACC	CCGCATAACA GGCGTATTGT	GCGGTCATTG CGCCAGTAAC

5101	ACTGGAGCGA TGACCTCGCT	GGCGATGTTT CCGCTACAAG	GGGGATTCCC CCCCTAAGGG	AATACGAGGT TTATGCTCCA	CGCCAACATC GCGGTTGTAG

5151	TTCTTCTGGA AAGAAGACCT	GGCCGTGGTT CCGGCACCAA	GGCTTGATATG CCGAACATAC	GAGCAGCAGA CTCGTCGTCT	CGCGCTACTT GCGCGATGAA

5201	CGAGCGGAGG GCTCGCCTCC	CATCCGGAGC GTAGGCCTCG	TTGCAGGATC AACGTCTTAG	GCCGCGGCTC CGGCGCCGAG	CGGGCGTATA GCCCCGATAT

5251	TGCTCCGCAT ACGAGGCGTA	TGGTCTTGAC ACCAGAACTG	CAACTCTATC GTTGAGATAG	AGAGCTTGGT TCTCGAACCA	TGACGGCAAT ACTGCCGTTA

5301	TTCGATGATG AAGCTACTAC	CAGCTTGGGC GTCGAACCCG	GCAGGGTCGA CGTCCCAGCT	TGCGACGCAA ACGCTGCGTT	TCGTCCGATC AGCAGGCTAG

5351	CGGAGCCGGG GCCTCGGCCC	ACTGTCGGGC TGACAGCCCG	GTACACAAAT CATGTGTTTA	CGCCCGCAGA GCGGGCGTCT	AGCGCGGCCG TCGCGCCGGC

5401	TCTGGACCGA AGACCTGGCT	TGGCTGTGTA ACCGACACAT	GAAGTACTCG CTTCATGAGC	CCGATAGTGG GGCTATCACC	AAACCGACGC TTTGGCTGCG

5451	CCCAGCACTC GGGTCGTGAG	GTCCGAGGGC CAGGCTCCCG	AAAGGAATAG TTTCCTTATC	AGTAGATGCC TCATCTACGG	GACCGGGATC CTGGCCCTAG

5501	TATCGATAAA ATAGCTATTT	ATAAAAGATT TATTTTCTAA	TTATTTAGTC AATAAATCAG	TCCAGAAAAA AGGTCTTTTT	GGGGGGAATG CCCCCCTTAC

5551	AAAGACCCCA TTCTGGGGT	CCTGTAGGTT GGACATCCAA	TGGCAAGCTA ACCGTTCGAT	GCTTAAGTAA CGAATTCATT	CGCCATTTTG GCGGTAAAAA

5601	CAAGGCATGG GTTCCGTACC	AAAAATACAT TTTTTATGTA	AACTGAGAAT TTGACTCTTA	AGAGAAGTTC TCTCTTCAAG	AGATCAAGGT TCTAGTTCCA

5651	CAGGAACAGA GTCTTGCTCT	TGGAACAGCT ACCTTGTCGA	GAATATGGGC CTTATACCCG	CAAACAGGAT GTTTGTCTTA	ATCTGTGGTA TAGACACCAT

5701	AGCAGTTCCT TCGTCAAGGA	GCCCCGGCTC CGGGGCCGAG	AGGGCCAAGA TCCCGGTTCT	ACAGATGGAA TGTCTACCTT	CAGCTGAATA GTCGACTTAT
5751	TGGGCCAAAC ACCCGGTTTG	AGGATATCTG TCCTATAGAC	TGGTAAGCAG ACCATTTCGTC	TTCCTGCCCC AAGGACGGGG	GGCTCAGGGC CCGAGTCCCC
5801	CAAGAACAGA GTTCTTGTCT	TGGTCCCCAG ACCAGGGGTC	ATGCGGTCCA TACGCCAGGT	GCCCTCAGCA CGGGAGTCGT	GTTTCTAGAG CAAAGATCTC
5851	AACCATCAGA TTGGTAGTCT	TGTTTCCAGG ACAAAGGTCC	GTGCCCCAAG CACGGGGTTC	GACCTGAAAT CTGGACTTTA	GACCCTGTGC CTGGGACACG
5901	CTTATTTGAA GAATAAACTT	CTAACCAATC GATTGGTTAG	AGTTCGCTTC TCAAGCGAAG	TCGCTTCTGT AGCGAAGACA	TCGCGCGCTT AGCGCGCGAA
5951	CTGCTCCCCG GACGAGGGGC	AGCTCAATAA TCGAGTTATT	AAGAGCCCAC TTCTCGGGTG	AACCCCTCAC TTGGGGAGTG	TCGGGGCGCC AGCCCCGCGG
6001	AGTCCTCCGA TCAGGAGGCT	TTGACTGAGT AACTGACTCA	CGCCCGGGTA GCGGGCCCAT	CCCGTGTATC GGGCACATAG	CAATAAACCC GTTATTTGGG
6051	TCTTGCA GTT AGAACGTCAA	GCATCCGACT CGTAGGCTGA	TGTGGTCTCG ACACCAGAGC	CTGTTCTTTG GACAAGGAAC	GGAGGGTCTC CCTCCCAGAG
6101	CTCTGAGTGA GAGACTCACT	TTGACTACCC AACTGATGGG	GTCAGCGGGG CAGTCGCCCC	GTCTTTCATT CAGAAAGTAA	CATGCAGCAT GTACGTCGTA
6151	GTATCAAAAT CATAGTTTTA	TAATTTGGTT ATTAAACCAA	TTTTTCTTTA AAAAAAGAAT	AGTATTTACA TCATAAATGT	TTAAATGGCC AATTTACCGG
6201	ATAGTTGCAT TATCAACGTA	TAATGAATCG ATTACTTAGC	GCCAACGCGC CGGTTGCGCG	GGGGAGAGGC CCCCTCTCCG	GGTTTGCGTA CCAAACGCAT
6251	TTGGCGCTCT AACCGCGAGA	TCCGCTTCCT AGGCGAAGGA	CGCTCACTGA GCGAGTGACT	CTCGCTGCGC GAGCGACGCG	TCGGTCGTTT AGCCAGCAAG
6301	GGCTGCGGCG CCGACGCCGC	AGCGGTATCA TCGCCATAGT	GCTCACTCAA CGAGTGAGTT	AGGCGGTAAT TCCGCCATTA	ACGGTTATCC TGCCAATAGG
6351	ACAGAATCAG TGTCTTAGTC	GGGATAACGC CCCTATTGCG	AGGAAAGAAC TCCTTTCTTG	ATGTGAGCAA TACACTCGTT	AAGGCCAGCA TTCCGGTCGT
6401	AAAGGCCAGG TTTCCGGTCC	AACCGTAAAA TTGGCATTTT	AGGCCGCGTT TCCGGCGCAA	GCTGGCGTTT CGACCGCAAA	TTCCATAGGC AAGGTATCCG
6451	TCCGCCCCCC AGGCGGGGGG	TGACGAGCAT ACTGCTCGTA	CACAAAAATC GTGTTTTTAG	GACGCTCAAG CTGCGAGTTC	TCAGAGGTGG AGTCTCCACC
6501	CGAAACCCGA GCTTTGGGCT	CAGGACTATA GTCCTGATAT	AAGATACCAG TTCTATGGTC	GCGTTTCCCC CGCAAAGGGG	CTGGAAGCTC GACCTTCGAG
6551	CCTCGTGCGC GGAGCACGCG	TCTCCTGTTC AGAGGACAAAG	CGACCCTGCC GCTGGGACGG	GCTTACCGGA CGAATGGCCT	TACCTGTCCG ATGGACAGGC
6601	CCTTTCTCCC GGAAAGAGGG	TTCGGGAAGC AAGCCCTTCG	GTGGCGCTTT CACCGCGAAA	CTCATAGCTC GAGTATCGAG	ACGCTGTAGG TGCGACATCC

6651	TATCTCAGTT	CGGTGTAGGT	CGTTCGCTCC	AAGCTGGGCT	GTGTGCACGA
	ATAGAGTCAA	GCCACATCCA	GCAAGCGAGG	TTCGACCCGA	CACACGTGCT

6701	ACCCCCCGTT	CAGCCCGACC	GCTGCGCCTT	ATCCGGTAAC	TATCGTCTTG
	TGGGGGGCAA	GTCGGGCTGG	CGACGCGGAA	TAGGCCATTG	ATAGCAGAAC

6751	AGTCCAACCC	GGTAAGACAC	GACTTATCGC	CACTGGCAGC	AGCCACTGGT
	TCAGGTTGGG	CCATTCTGTG	CTGAATAGCG	GTGACCGTCG	TCGGTGACCA

6801	AACAGGATTA	GCAGAGCGAG	GTATGTAGGC	GGTGCTACAG	AGTTCTTGAA
	TTGTCCTAAT	CGTCTCGCTC	CATACATCCG	CCACGATGTC	TCAAGAACTT

6851	GTGGTGGCCT	AACTACGGCT	ACACTAGAAG	AACAGTATTT	GGTATCTGCG
	CACCACCGGA	TTGATGCCGA	TGTGATCTTC	TTGTCATAAA	CCATAGACGC

6901	CTCTGCTGAA	GCCAGTTACC	TTCGGAAAAA	GAGTTGGTAG	CTCTTGATCC
	GAGACGACTT	CGGTCAATGG	AAGCCTTTTT	CTCAACCATC	GAGAACTAGG

6951	GGCAAACAAA	CCACCGCTGG	TAGCGGTGGT	TTTTTTGTTT	GCAAGCAGCA
	CCGTTTGTTC	GGTGGCGACC	ATCGCCACCA	AAAAAACAAA	CGTTCGTCGT

7001	GATTACGCGC	AGAAAAAAG	GATCTCAAGA	AGATCCTTTG	ATCTTTTCTA
	CTAATGCGCG	TCTTTTTTTC	CTAGAGTTCT	TCTAGGAAAC	TAGAAAAGAT

7051	CGGGGTCTGA	CGCTCAGTGG	AACGAAAACT	CACGTTAAGG	GATTTTGGTC
	GCCCCAGACT	GCGAGTCACC	TTGCTTTTGA	GTGCAATTCC	CTAAAACCAG

7101	ATGAGATTAT	CAAAAAGGAT	CTTCACCTAG	ATCCTTTTGC	GGCCGCAAAAT
	TACTCTAATA	GTTTTTCCTA	GAAGTGATC	TAGGAAAACG	CCGGCGTTTA

7151	CAATCTAAAG	TATATATGAG	TAAACTTGGT	CTGACAGTTA	CCAATGCTTA
	GTTAGATTTC	ATATATACTC	ATTTGAACCA	GACTGTCAAT	GGTTACGAAT

7201	ATCAGTGAGG	CACCTATCTC	AGCGATCTGT	CTATTTTCGT	CATCCATAGT
	TAGTCACTCC	GTGGATAGAG	TCGCTAGACA	GATAAAGCAA	GTAGGTATCA

7251	TGCCTGACTC	CCCGTCGTGT	AGATAACTAC	GATACGGGAG	GGCTTACCAT
	ACGGACTGAG	GGGCAGCACA	TCTATTGATG	CTATGCCCTC	CCGAATGGTA

7301	CTGGCCCCAG	TGCTGCAATG	ATACCGCGAG	ACCCACGCTC	ACCGGCTCCA
	GACCGGGGTC	ACGACGTTAC	TATGGCGCTC	TGGGTGCGAG	TGGCCGAGGT

7351	GATTTATCAG	CAATAAACCA	GCCAGCCGGA	AGGGCCGAGC	GCAGAAGTGG
	CTAAATAGTC	GTTATTTGGT	CGGTTCGGCCT	TCCCGGCTCG	CGTCTTCACC

7401	TCCTGCAACT	TTATCCGCCT	CCATCCAGTC	TATTAATTGT	TGCCGGGAAG
	AGGACGTTGA	AATAGGCGGA	GGTAGGTCAG	ATAATTAACA	ACGGCCCTTC

7451	CTAGAGTAAG	TAGTTCGCCA	GTTAATAGTT	TGCGCAACGT	TGTTGCCATT
	GATCTCATTC	ATCAAGCGGT	CAATTATCAA	ACGCGTTGCA	ACAACGGTAA

7501	GCTACAGGCA	TCGTGGTGTC	ACGCTCGTCG	TTTGGTATGG	CTTCATTGAG
	CGATGTCCGT	AGCACCACAG	TGCGAGCAGC	AAACCATACC	GAAGTAAGTC

7551	CTCCGGTTCC	CAACGATCAA	GGCGAGTTAC	ATGATCCCCC	ATGTTGTGCA
	GAGGCCAAGG	GTTGCTAGTT	CCGCTCAATG	TACTAGGGGG	TACAACACGT

7601	AAAAAGCGGT	TAGCTCCTTC	GGTCCTCCGA	TCGTTGTCAG	AAGTAAGTTG
	TTTTTCGCCA	ATCGAGGAAG	CCAGGAGGCT	AGCAACAGTC	TTCATTCAAC

7651	GCCGCAGTGT	TATCACTCAT	GGTTATGGCA	GCACTGCATA	ATTCTCTTAC
	CGGCGTCACA	ATAGTGAGTA	CCAATACCGT	CGTGACGTAT	TAAGAGAATG

7701	TGTCATGCCA	TCCGTAAGAT	GCTTTTCTGT	GACTGGTGAG	TACTCAACCA
	ACAGTACGGT	AGGCATTCTA	CGAAAAGACA	CTGACCACTC	ATGAGTTGGT

7751	AGTCATTCTG	AGAATAGTGT	ATGCGGCGAC	CGAGTTGCTC	TTGCCCGGCG
	TCAGTAAGAC	TCTTATCACA	TACGCCGCTG	GCTCAACGAG	AACGGGCCGC

7801	TCAATACGGG	ATAATACCGC	GCCACATAGC	AGAACTTTAA	AAGTGCTCAT
	AGTTATGCCC	TATTATGGCG	CGGTGTATCG	TCTTGAAATT	TTCACGAGTA

7851	CATTGGAAAA	CGTTCTTCGG	GGCGAAAAC	CTCAAGGATC	TTACCGCTGT
	GTAACCTTTT	GCAAGAAGCC	CCGCTTTTGA	GAGTCCTAG	AATGGCGACA

7901	TGAGATCCAG	TTCGATGTAA	CCCACTCGTG	CACCCAACTG	ATCTTCAGCA
	ACTCTAGGTC	AAGCTACATT	GGGTGAGCAC	GTGGGTTGAC	TAGAAGTCGT

7951	TCTTTTACTT	TCACCAGCGT	TTCTGGGTGA	GCAAAAACAG	GAAGGCAAAA
	AGAAAATGAA	AGTGGTCGCA	AAGACCCACT	CGTTTTTGTC	CTTCCGTTTT

8001	TGCCGCAAAA	AAGGGAATAA	GGGCGACACG	GAAATGTTGA	ATACTCATAC
	ACGGCGTTTT	TTCCCTTATT	CCCGCTGTGC	CTTTACAAC	TATGAGTATG

8051	TCTTCCTTTT	TCAATATTAT	TGAAGCATTT	ATCAGGGTTA	TTGTCTCATG
	AGAAGGAAAA	AGTTATAATA	ACTTCGTAAA	TAGTCCCAAT	AACAGAGTAC

8101	AGCGGATACA	TATTTGAATG	TATTTAGAAA	AATAAACAAA	TAGGGGTTC
	TCGCCTATGT	ATAAACTTAC	ATAAATCTTT	TTATTTGTTT	ATCCCCAAGG

8151	GCGCACATTT	C			
	CGCGTGTA	AAA	G		

09759152-011601

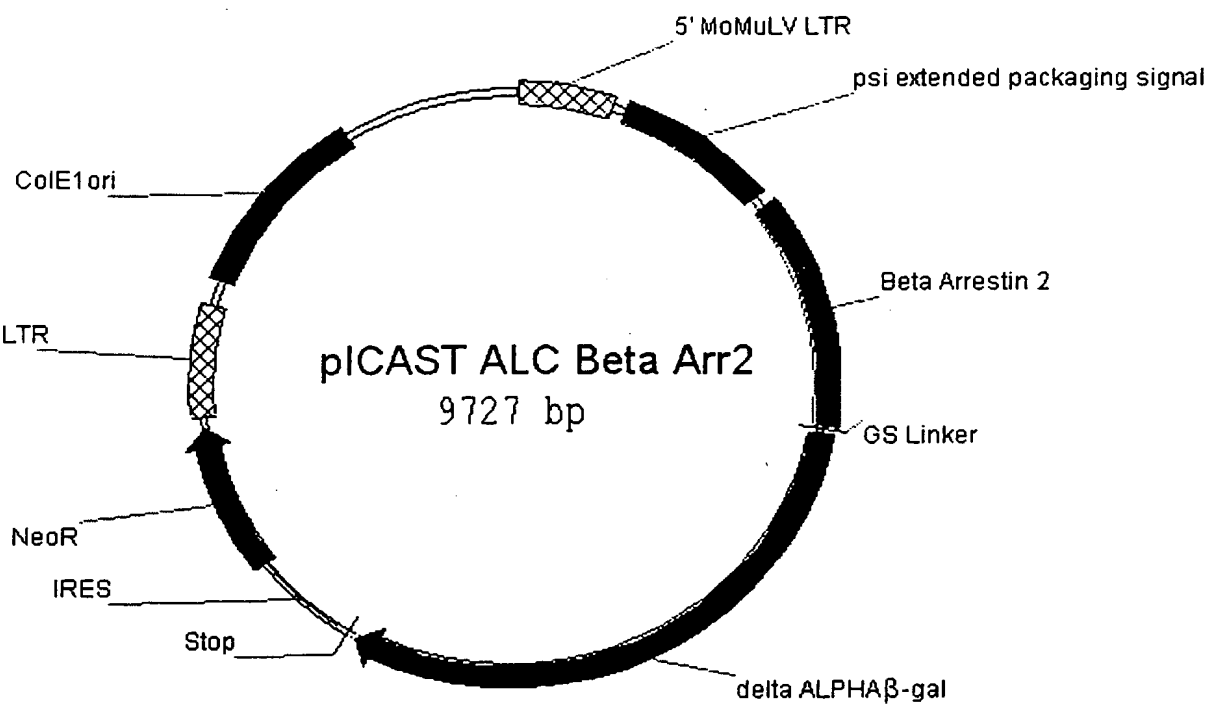


Figure 14

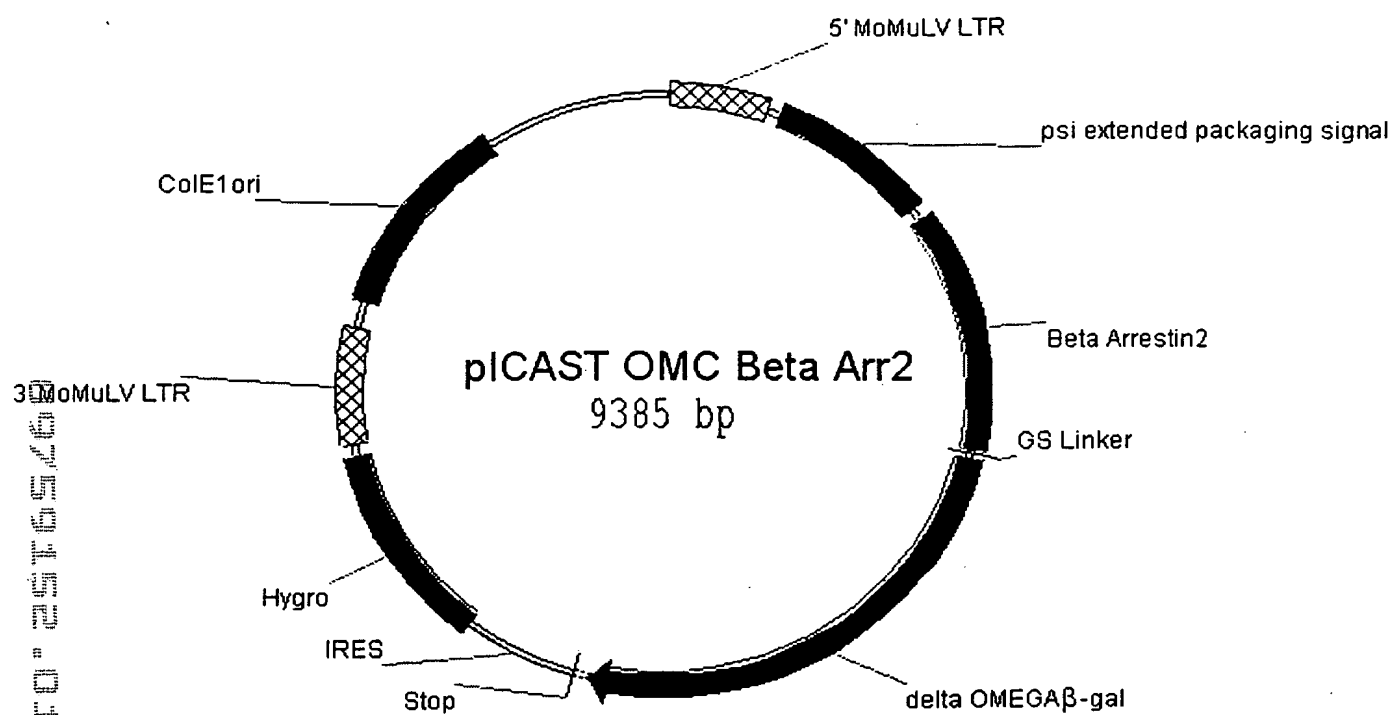


Figure 15

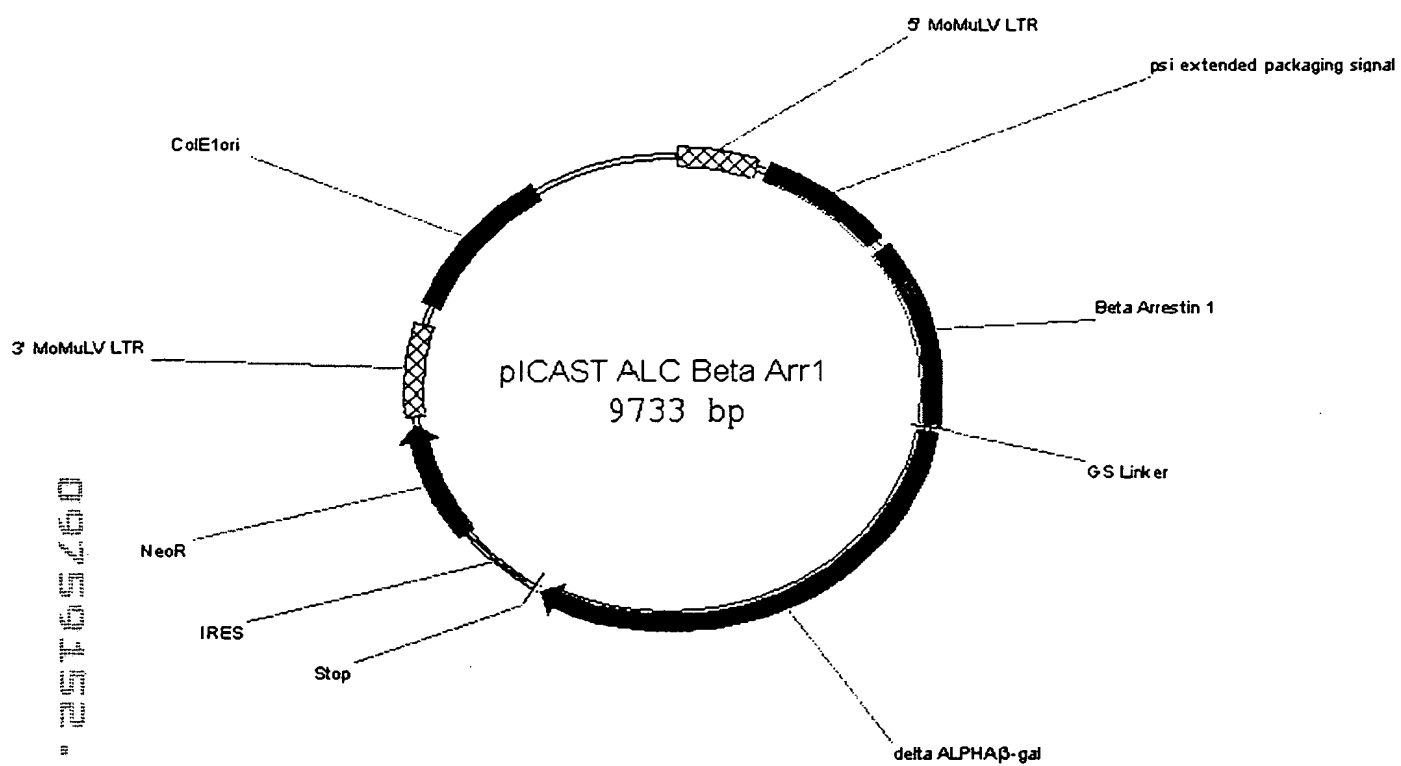


Figure 16

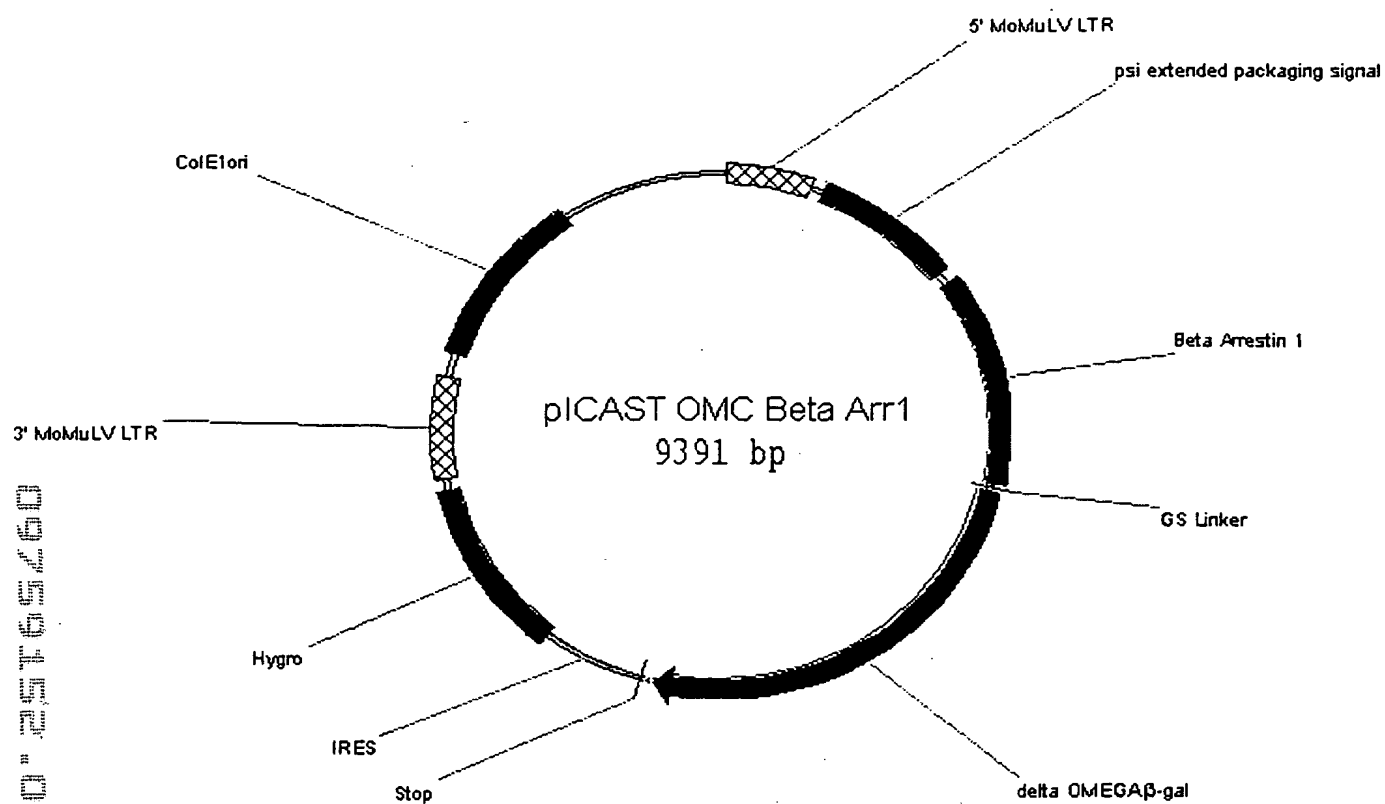


Figure 17

09759152.011501
T09T0"25T65/60

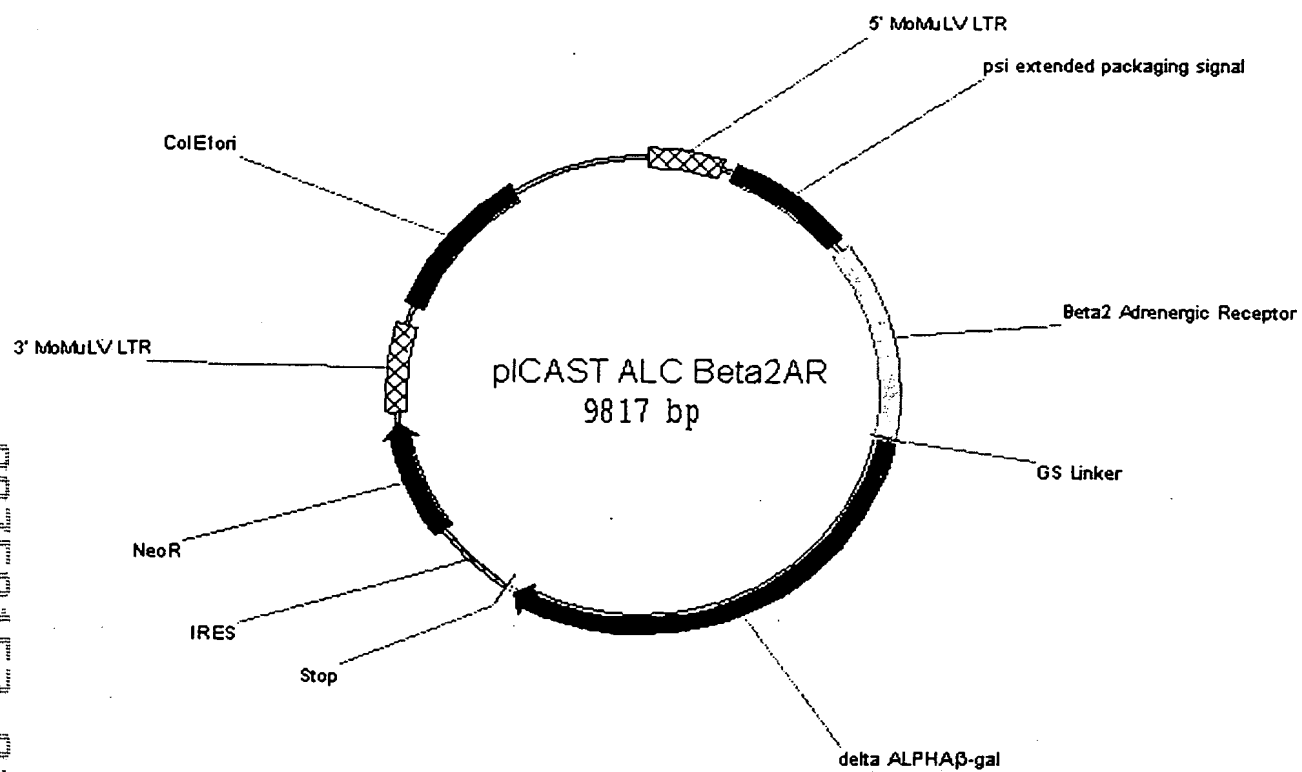


Figure 18

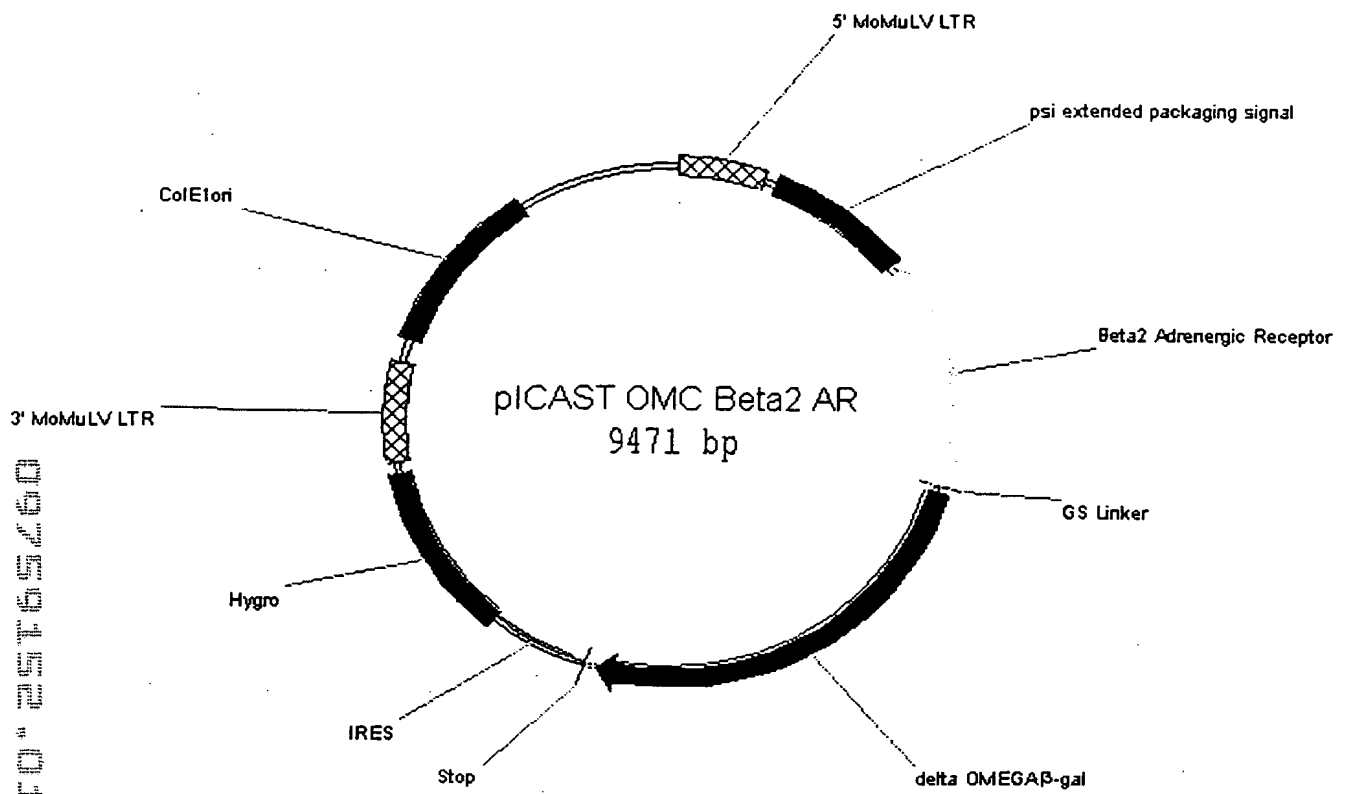


Figure 19

09759152-014601
FIGURE 20

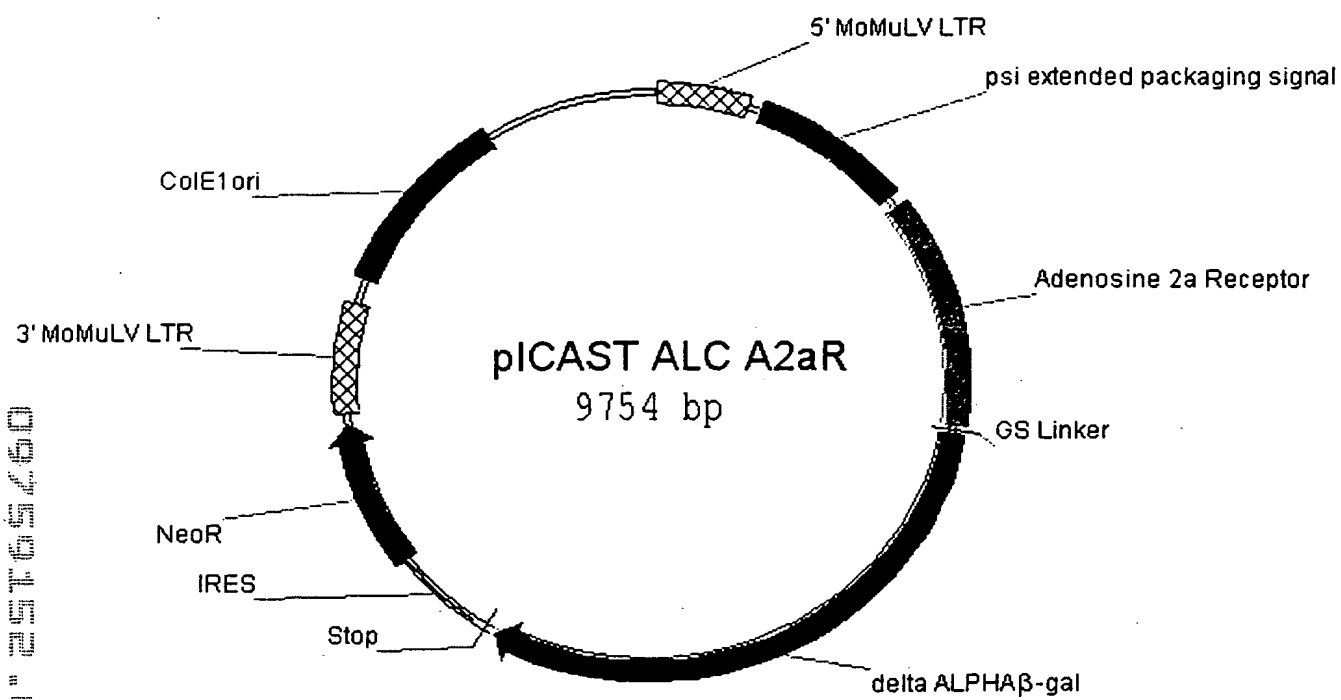


Figure 20

09759153-011601
T091T0"25T65/60

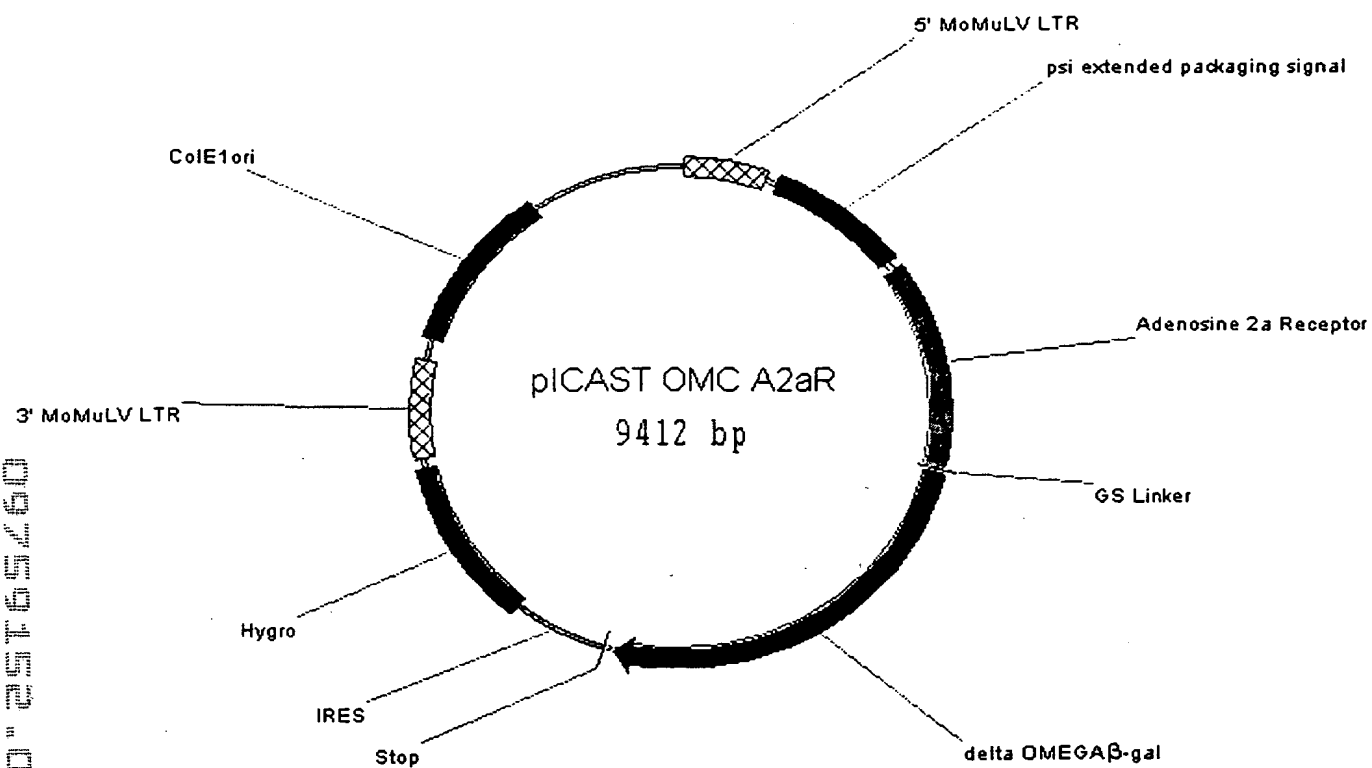


Figure 21

09759152-011501
T09T0"25T65260

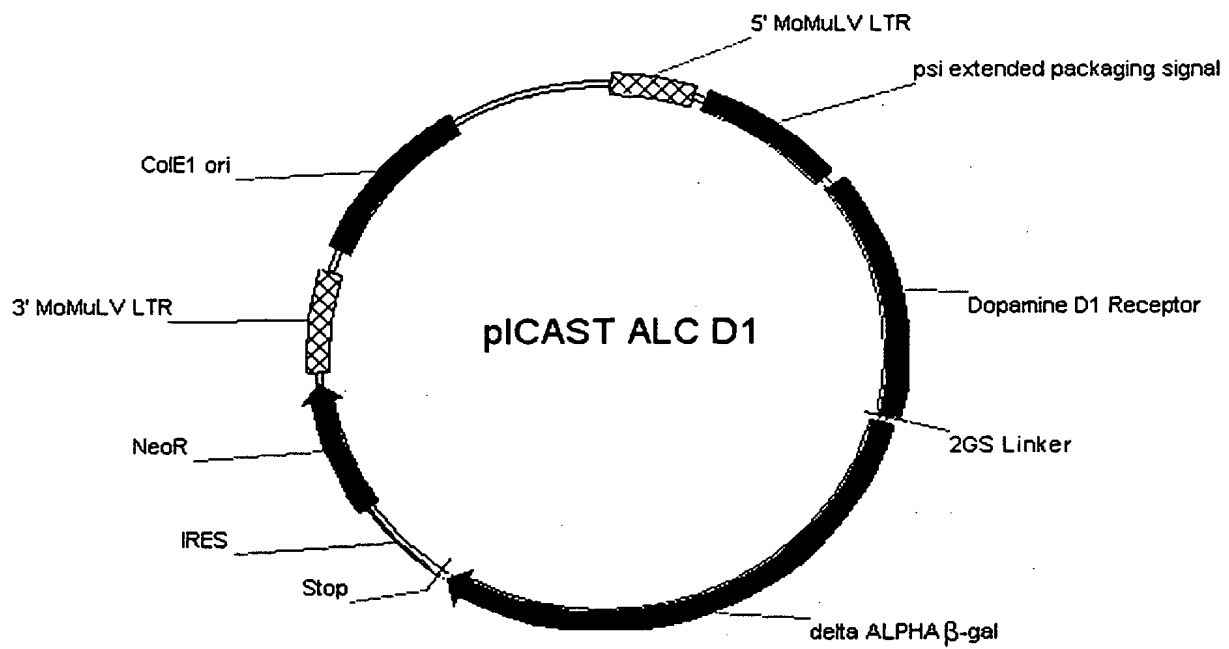
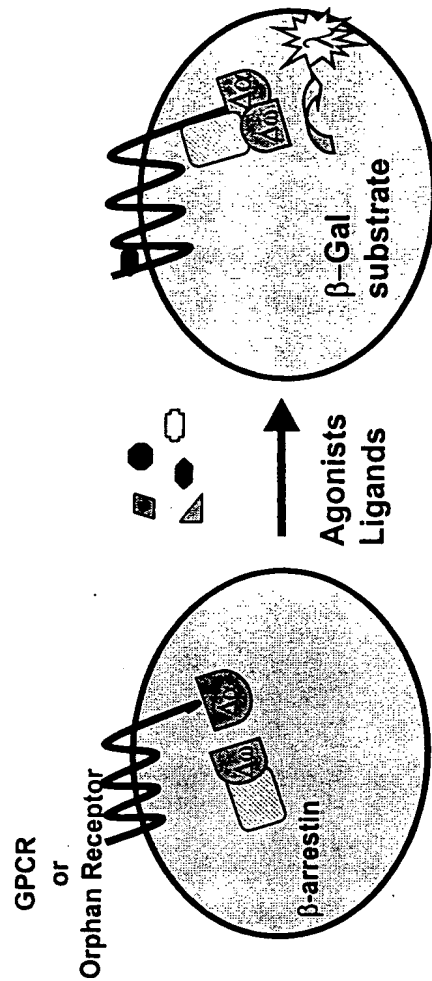


Figure 22

**Functional GPCR Activation Assay and Ligand Fishing for Orphan Receptors
by β -galactosidase mutant complementation in ICASTM System**

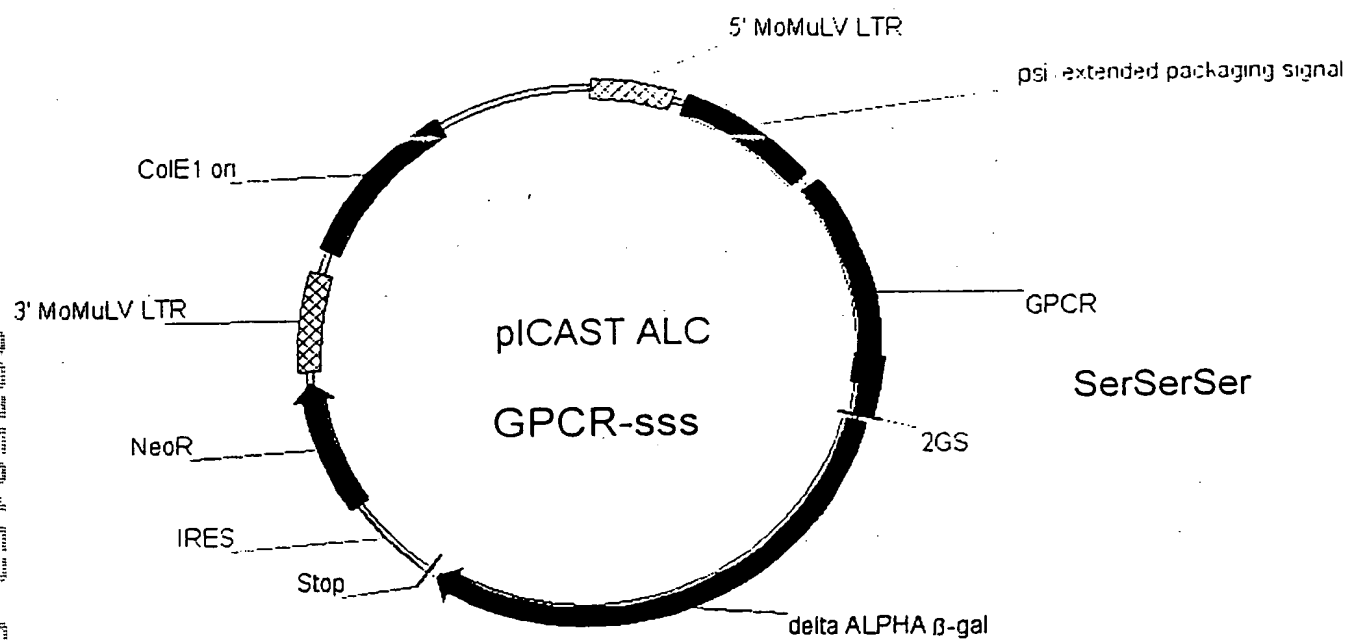


Examples



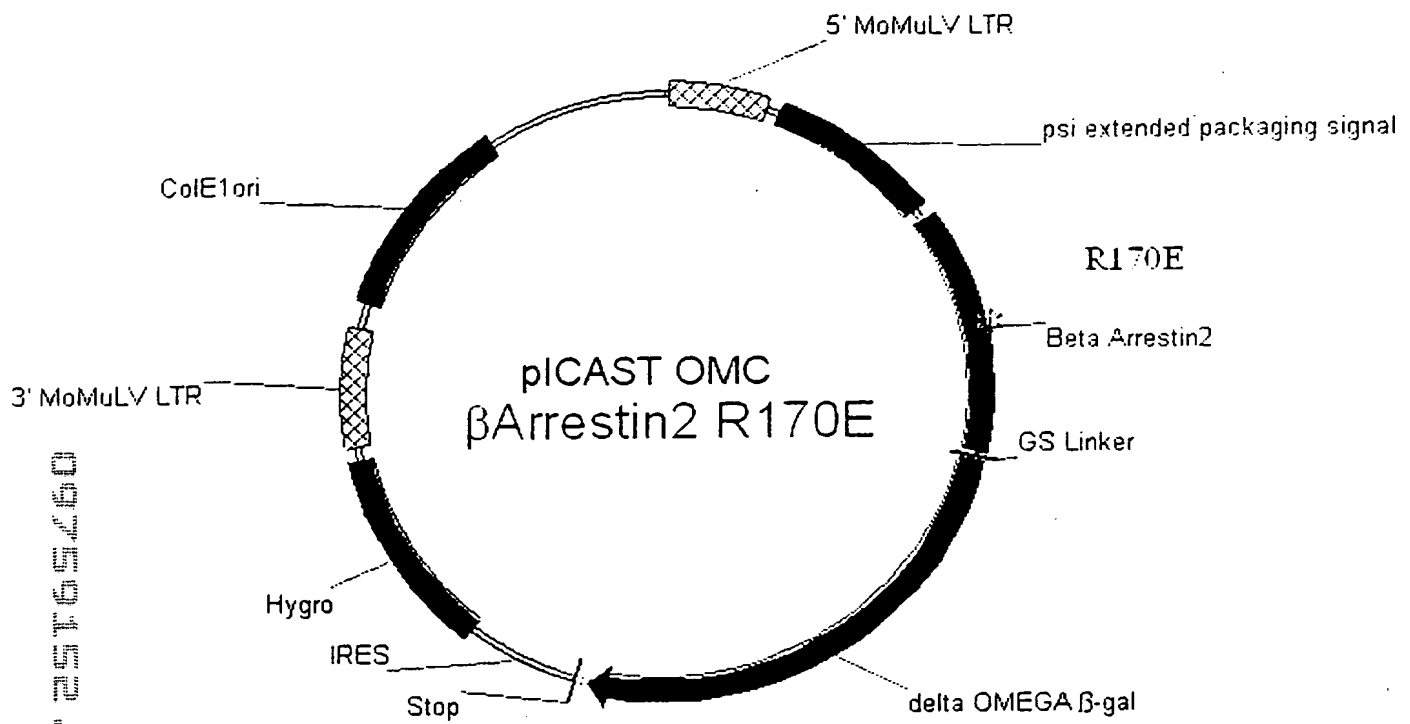
Figure 23

09759152-011601



Vector for Expression of a GPCR with inserted Seronine/Threonine amino acid sequences as a fusion with β -gal $\Delta\alpha$.

FIGURE 24



Vector for Expression of mutant (R170E) β -arrestin2 as a fusion with β -gal $\Delta\omega$.

FIGURE 25

Phosphorylation Insensitive Mutant R170E β -Arrestin2 $\Delta\omega$
 Binds to β_2 AR $\Delta\alpha$ in Response to Agonist Activation

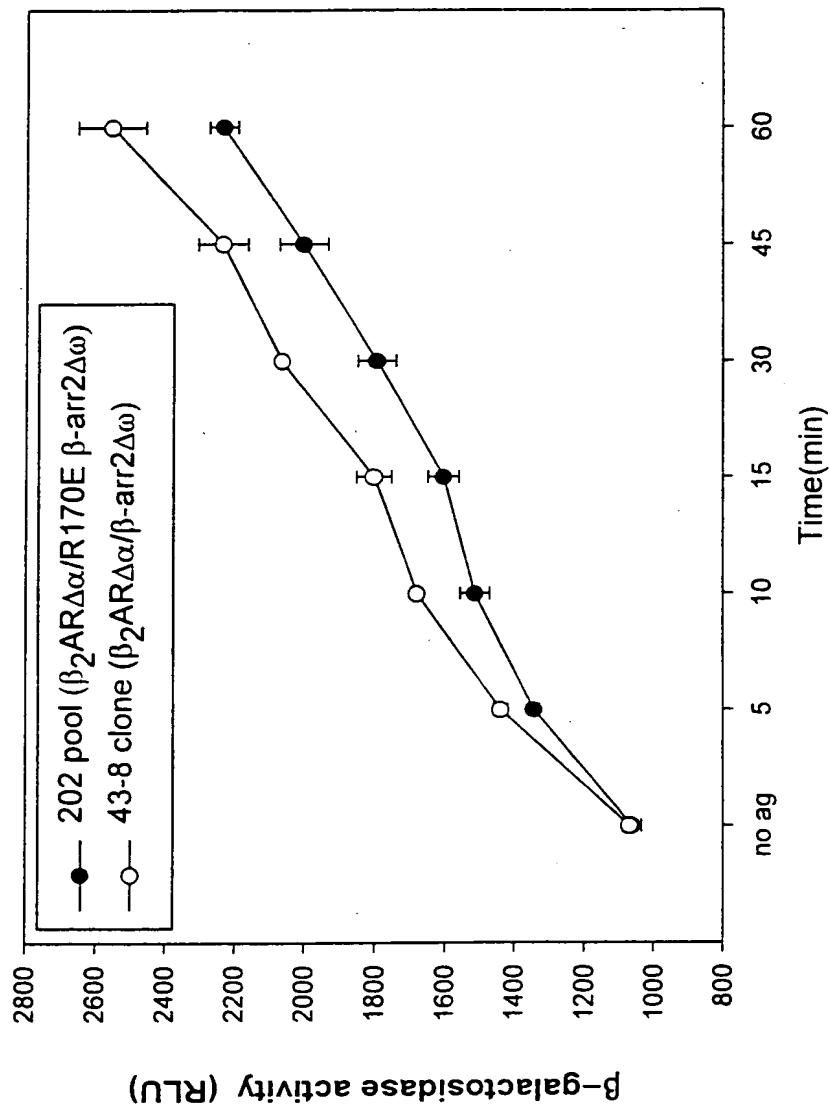
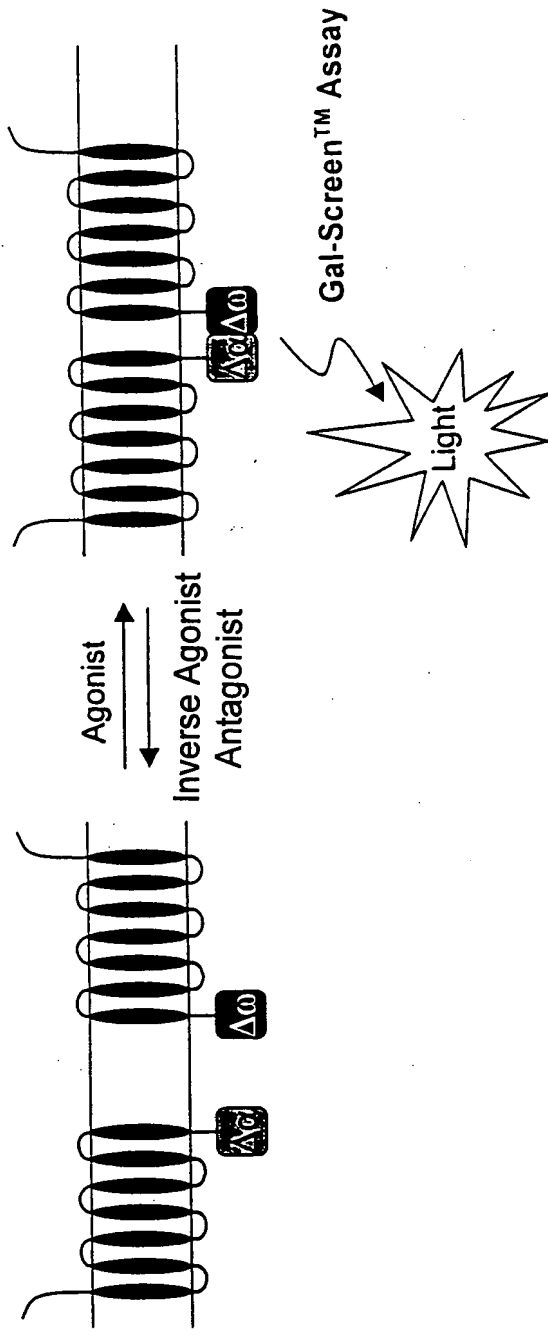


FIGURE 26

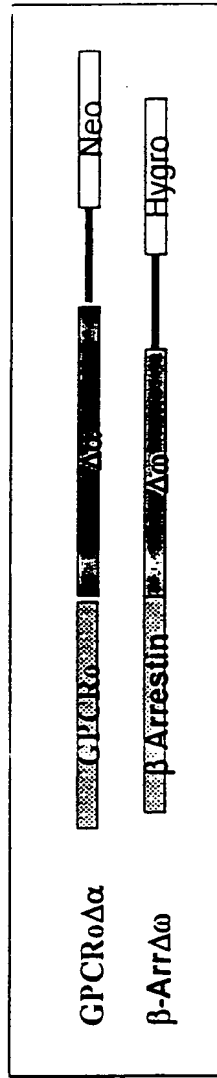
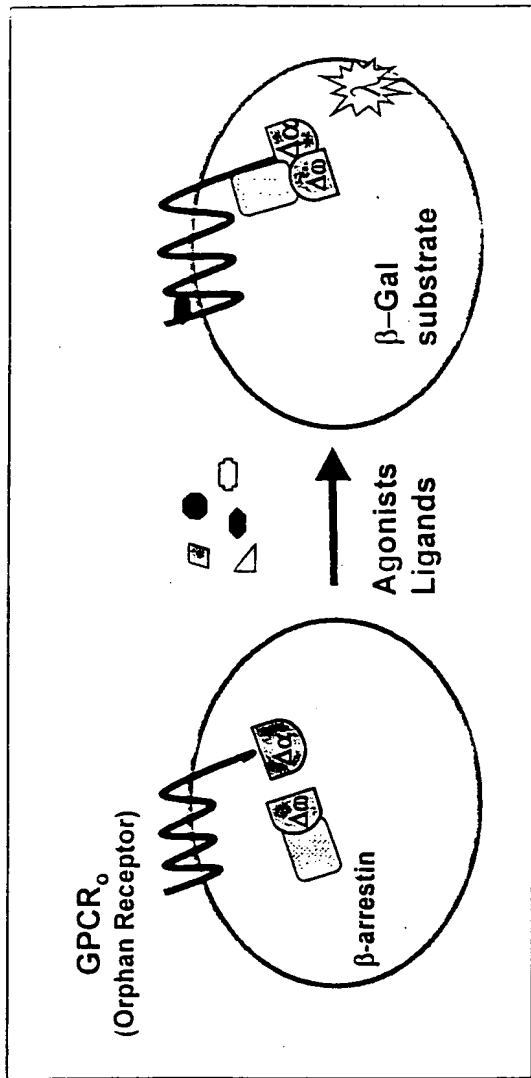


GPCR dimerization measured by β -gal complementation

FIGURE 27

Example-

TESTO" 25T55260



Ligand Fishing for Orphan Receptors by β-galactosidase mutant complementation in ICAST™ System

FIGURE 28